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ABSTRACT

Revised to be in accordance with the customs, traditions, beliefs, and practices of the Muslim Filipinos, these social studies units will help secondary-level Filipino students understand world population problems and develop the necessary skills, attitudes, and values that will lead them to make rational decisions about population matters, particularly about family size. The units are organized topically by grade level: Population Growth and Economic Development, first year of high school; Population Issues, second year of high school; Population Changes, third year of high school; and Planning for the Future, fourth year of high school. Students are involved in many different kinds of learning activities. For example, they analyze population trends, conduct and analyze a neighborhood census, analyze case studies, role play, and read and discuss short readings. Unit information provided for each grade level includes theme, concepts, suggested time allotment, unit overview, and an outline of objectives and content. Each unit is comprised of several lessons. Each lesson includes the following information: objectives, content, teaching procedures, learning activities, and a test. Student materials are included in the lessons. (RM)

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TEACHER'S GUIDE IN POPULATION EDUCATION

For

SOCIAL STUDIES

First Year - Fourth Year

SECONDARY LEVEL

(Revised for Muslim Filipinos)

POPULATION EDUCATION PROGRAM
Ministry of Education and Culture

Manila
1981

SO 014 911

PREFACE

The population of the Philippines continues to grow at a high rate and the resulting unfavorable economic, social and health consequences on the life of the people have prompted several government agencies to initiate measures to help curb it. One such agency is the Ministry of Education and Culture.

As early as 1970, the Department of Education and Culture as the Ministry was known then, has been cognizant of the fact that the school can be a potent force which can be utilized in the resolution of the country's population problem. Since the establishment of the Population Education Program (PEP) in 1972 with financial assistance from the United Nations Fund for Population Activities, population education, which is a relatively new field of study, has been introduced in the curricula of the elementary, secondary and tertiary schools of the formal school system. With this innovation, it is envisioned that the Filipino youth will be able to acquire knowledge and understanding of the total population situation of the country and the world as well as develop necessary skills, attitudes and values that will lead them to make rational decisions and actions on population matters, particularly, on family size when the time comes. This is a long-term measure and its impact cannot be felt immediately. Yet upon it depends a lot hopefully, the realization of the country's socio-economic goals and the fulfillment of human aspirations towards a better quality of life.

Since the time of its launching, the Population Education Program has been pursuing three major activities in the comprehensive implementation of population education, namely: research and evaluation; curriculum development; and training of teachers and prospective teachers. In curriculum development, the PEP has already prepared, among other materials, secondary teacher's guides in population education for integration in Social Studies, Health, Home Economics, Science and Mathematics. Since these guides were prepared for general adoption and by curriculum writers who were Christian and urban-based, it was felt that there was a need to revise these materials in accordance with regional/subcultural needs and conditions if they are to be made acceptable to the regional end-users and more relevant to their needs.

In a curriculum development workshop for Muslim Filipinos on the secondary level held at the La Salette Seminary in Silang, Cavite from April 24 to May 19, 1978, selected secondary Muslim teachers and administrators from Regions IX and XII revised the secondary teacher's guides in population education to make them indigenous to the customs, traditions, beliefs and practices of the Muslim Filipinos. Herewith is the hope that the product of this undertaking will be welcomed by the Muslim end-users for the content of these materials is in accord with their culture and religion. These instructional materials were tried out in selected high schools in Regions IX and XII by the participants themselves and/or other selected teachers during the first semester of school year 1978-1979 to test their effectiveness, suitability and acceptability. Feedback from this tryout was consequently used as basis for the further refinement and revision of the guides before they were put into final print.

It is suggested that the teachers study these guides very thoroughly by reading through the overview, lessons and appendices in order that they will have a full grasp of what to teach and what to prepare before the actual teaching and where in the regular guides of the five subject areas they are going to integrate the exercises, lessons or sub-units in population education. By supplementing the study of the guides with additional readings from the Background Information for Teachers (BIT) for a more in-depth knowledge of the content of population education, it is expected that the teachers will be able to teach population education more efficiently and effectively.

JUAN L. MANUEL
Minister of Education and Culture
Project Director, PEP

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POPULATION EDUCATION PROGRAM
Ministry of Education and Culture

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The revision of the PEP Secondary Population Education Teacher's Guides, integrated in the above-mentioned subjects, was intended for the purpose of making them more relevant and responsive to the local needs, conditions, and culture in the Muslim areas. Such revision was made in a curriculum development workshop in population education for Muslim Filipinos, secondary level, which was held at the La Salette Seminary in Silang, Cavite from April 24 to May 19, 1978.

In the preparation of the revised secondary population education curriculum materials, the cooperation and assistance of a number of teachers, school officials, agencies, and institutions had been solicited.

The difficult tasks of revising the secondary teacher's guides were painstakingly and ably done by selected secondary teachers and school officials from the Muslim areas of Regions IX and XII.

Special credit goes to Mr. Faustino S. Miranda, Secondary Assistant Principal III, Dayang-Dayang Hadji Piandao Memorial High School, Jolo, Sulu; Mr. Tambas A. Cader, OIC, MSU-Saguiaran High School, Saguiaran, Lanao del Sur; Mr. Melecio S. Rojas, Secondary School Teacher, Cotabato National High School, Cotabato City; and Miss Amina D. Domato, Secondary School Teacher, Malabang National High School, Malabang, Lanao del Sur, for their efforts in revising the secondary teacher's guide in population education for Social Studies; to Mrs. Claridela N. Lomodag, Principal, MSU-Tugaya Community High School, Tugaya, Lanao del Sur; Miss Hadja Badria H. Jajurie, Guidance Coordinator, Dayang-Dayang Hadji Piandao Memorial High School, Jolo, Sulu; and Messrs. Mamualas M. Alon and Rudy K. Balhaman, Secondary School Teachers, Cotabato National High School, Cotabato City, for their efforts in revising the secondary teacher's guide in population education for Health; to Miss Loretta C. Andoy, Principal, MSU Balindong Community High School, Lanao del Sur; Mrs. Maimona O. Karim, Secondary Classroom Teacher, Tawi-Tawi Pilot Opportunity School of Fisheries, Bongao, Tawi-Tawi; and Miss Bayanan A. Acbar, Secondary

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Remedios M. Cayari
REMEDIOS M. CAYARI
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A POPULATION EDUCATION UNIT IN SOCIAL STUDIES

First Year - Population Growth and Economic Development

Conceptual Theme : The Community
Concept : Interdependence
Sub-Concept : Economic Growth and Development
Generalization : Population growth affects the economic growth and development of the community.
Suggested Time Allotment: 4-5 class periods

OVERVIEW

One of the pressing problems facing the country at present is the imbalance between population and resources. The population of the Philippines keeps on growing rapidly and because of this situation, production cannot keep pace with the rapid growth of population. How rapid population growth (RPG) affects the economic development of the community is the focus and main topic of this unit. After the unit on interdependence has been taken up, it is suggested that this unit be taught. It can also be taught as an independent unit if the teacher cannot find any related unit in the Social Studies Guide that he is using.

The population education sub-unit in Grade VI Social Studies provides the basic knowledge necessary to understand that population size influences the economic development of the family and of the community.

The unit first discusses some aspects of the population situation in the community. Rapid population growth brings out other related demographic concepts such as age structure, dependency ratio, and per capita income which are all essential to an understanding of the relationship between RPG and economic development.

The unit makes use of simple approaches in developing economics and population education concepts. Getting population data from the Civil Registrar's Office and conducting a census of the school neighborhood are two learning experiences which will familiarize the students with different sources of population data readily available in the community. Tables are used in order to assist the students to visualize numbers and to use these for making reports or for formulating simple concepts, opinions, or conclusions. Likewise, practice exercises in graphing data collected by the students themselves and in solving problems related to family and national per capita income are provided in order to bring down the lesson to the level of understanding and interest of the students.

At the end of the unit is a section on evaluation. In this section are samples of evaluative instruments intended to measure some knowledges and skills developed in the unit. Other evaluative tools and devices or test items may be added to these samples depending on the needs of the students.

I. OBJECTIVES

A. General

Understand that population trends influence the economic development of the community.

B. Specific

1. Analyze population facts and figures about the local community.
2. Prove that high birth rate and low death rate contribute to rapid population growth.
3. Discuss the age structure of the community and compare this with that of the nation.
4. Discuss the implications of a high dependency ratio.
5. Explain the relation between per capita income and economic development.
6. Point out the relationship between population growth and economic growth and development.
7. Conduct a simple census.

II. CONTENT

A. In terms of topics

1. Population Trends in the Community
2. Effects of RPG on the Age Structure of a Population
3. Implications of a Young Population on the Economic Development of the Community
4. Relation Between Per Capita Income and Economic Development

B. In terms of related ideas

1. Birth rate and death rate affect the population growth of the community.
2. The rate of population growth affects the age structure of the community.
3. The age structure of a population affects the burden of dependency in a population.
4. The dependency burden influences the economic welfare of the family and the community.
5. Rapid population growth affects the per capita income of a community.
6. The per capita income affects the standard of living in a community, and hence, affects its economic growth.

III. SUGGESTED PROCEDURE

Lesson 1

A. Objectives

1. Analyze population situations of a community and the measures related to them.
2. Prove that a high birth rate and low death rate affect population growth.

B. Opener

As a springboard for the discussion of the present population situation of the community, have the students form buzz groups of from 6 to 8 members to react to this question.

> From what you have heard from your elders and from your own observations, in what different ways has our community changed since World War II or since you were a young child?

Give five minutes for the buzz sessions after which each group leader reports on the finding of his group. The reporters of the different groups may cite changes in sanitation and public health, in transportation and communication, in housing, in occupations and industries, in education, and in population growth.

C. Development

Is it really true that the population of our community has greatly increased since World War II? Are there evidences to show that?

The students may mention figures they gathered or conditions they have observed to show increased population growth in the community. To confirm or supplement the information given by the students, present the population of the community (barrio, town, or city) for several years, starting in 1948 in the form of a table to show the population trend in that community from immediately after World War II up to the present. The first census taken after World War II was in 1948. (A student or the teacher may get these data in advance from the Civil Registrar's Office.) The table may look like this:

The Population of Saguiaran*

Year	Population
1948	12,000
1950	13,000
1955	15,000
1960	18,000
1965	21,000
1970	23,500
1975	26,400

*This is a hypothetical town.

What was the population of Saguiaran in 1948? Was this immediately after World War II? Two years later, what was its population? In 1955, what was Saguiaran's population? In 1960? In 1965? In 1970? What is the present population of Saguiaran? What do you notice about how the years are arranged? (With the exception of the first and second years in this table, the years are arranged in intervals of fives.) What is the population trend in Saguiaran? When did the population of Saguiaran double since 1948? In how many years did it take the population of Saguiaran to double? Can you say that the population growth of Saguiaran is rapid? Why? What can be the cause or causes of this growth?

The students might mention the large number of births and the small number of deaths in the community as one of the causes of rapid population growth of Saguiaran. In highly industrialized or commercial places, the students might add in-migration as another cause of rapid population growth in the community. However, in most communities the number of migrants is insignificant and is, therefore, not a principal cause of rapid population growth.

Let us see whether a large number of births or a large number of migrants, as the case may be, and a small number of deaths really contribute to the rapid population growth of the community. As a special assignment, one of you got the number of births, deaths, and migrants in our community for a number of years.

Have the student assigned to get the data mentioned present the following table to the class.

Births, Deaths, and Migrants in Saguiaran

Year	No. of Births	No. of Deaths	No. of Migrants	
			In-Migrants	Out-Migrants
1948	516	180	2	3
1950	508	181	7	5
1955	510	178	5	6
1960	508	178	6	6
1965	505	170	4	7
1970	500	160	10	8
1975	480	155	5	4

What do you notice about the number of births from 1948 to the present? What about the trend in the number of deaths? What can you say about the number of migrants? Compare the number of births and deaths for each of the given years. Let us compute the birth rate and death rate for each given year so that we can compute the population growth rate. The growth rate of the population of Saguiaran will tell us whether the population growth of our community is rapid or not. Since the number of migrants is insignificant, we will not consider this in our computation of the population growth.

Tack the population table of Saguiaran beside the table on births, deaths, and migration.

What was the population of Saguiaran in 1948? (12,000) How many groups of 1,000 are there in a population of 12,000? (12,000 ÷ 1,000 = 12) What was the number of births in 1948? (480) Let us divide the number of births by the number of groups of 1,000 in the population. (516 ÷ 12 = 43) In 1948 the birth rate in Saguiaran was 43 per 1,000 population. The birth rate is usually expressed in terms of per 1,000 population. (Have a student write the birth rate of 43 in the corresponding blank of a table prepared in advance. The table may be similar to the one below after completing the entries.)

Year	Birth Rate	Death Rate	Rate of Natural Increase
1948	(43)	(15)	(28)
1950	(42)	(15)	(27)
1955	(42)	(15)	(27)
1960	(42)	(15)	(27)
1965	(42)	(14)	(28)
1970	(41)	(13)	(28)
1975	(40)	(12)	(28)

To compute the birth rate of a place for a given year, what do we do first? (Find the groups of 1,000 in the population for that given year.) What do we do next? (Divide the number of births by the number of groups of 1,000.) How do we usually express the birth rate? (Per 1,000 population) Who can compute on the chalkboard the birth rate of Saguiaran in 1950? (Do the same computation of birth rates for the succeeding years. Have the students enter the computed birth rates in the corresponding blanks in the table.)

A short-cut method for computing the birth rate is:

$$BR = \frac{\text{Number of Births}}{\text{Population}} \times 1{,}000.$$

Thus, the birth rate in Saguiaran in 1948 is:

$$BR = \frac{516}{12{,}000} \times 1{,}000 = .043 \times 1{,}000 = 43.$$

Let us compute the death rates in Saguiaran for several years. What was the population of Saguiaran in 1948? (12,000) What was the number of deaths in 1948 in Saguiaran? (180) Let us divide the number of deaths by the number of groups of 1,000. (180 ÷ 12 = 15) In 1948, the death rate in Saguiaran was 15 per 1,000 population. This means that for every 1,000 population in Saguiaran in 1948, there were 15 deaths. As in the case of the birth rate, death rate is also expressed per 1,000 population. (Have the students compute the death rate for the succeeding years. Again, have the death rates entered in their corresponding blanks in the table.)

Another method for computing the death rate is:

$$DR = \frac{\text{Number of deaths}}{\text{Population}} \times 1{,}000$$

Thus, the death rate in Saguiaran in 1948 was:

$$DR = \frac{180}{12{,}000} \times 1{,}000 = .015 \times 1{,}000 = 15.$$

Look at our table. What can you say about the birth rate for each year? How does the birth rate compare with the death rate for each year? In 1948 what was the birth rate in Saguiaran? What was the death rate? In 1948 what was the difference between the birth rate and the death rate in Saguiaran? (28) This means that in 1948, 28 persons were added to every 1,000 population in Saguiaran.

What is the term for the difference between the birth rate and the death rate? The difference between the birth rate and the death rate is called the rate of natural increase. This is called natural increase because the number of people added to the population is the result of the natural processes of birth and death. (Have the students compute the rates of natural increase for the succeeding years.)

The rate of natural increase in a place might well be the rate of population growth if there are no significant numbers of in-migrants and out-migrants in that place. For instance, if the rate of natural increase is 28 per 1,000, the population growth rate is the same: 28 per 1,000. However, the population growth rate is usually expressed in terms of per 100 or in terms of percent. So that 28 per 1,000 becomes 2.8 per 100 or 2.8% growth rate for 1948.

In communities where there are significant numbers of migrants to affect the population, and where there are available data on these, the population growth rate is computed by adding the birth rate and the net migration rate and subtracting from the sum of the two the death rate. For example, if there are 48 in-migrants and 12 out-migrants in Saguiaran in 1948, the net migrants are 36 (48 - 12 = 36). Again, as in the case of the birth and death rates, get the groups of 1,000 in the total population. Since the population of Saguiaran in 1948 was 12,000, we divide 12,000 by 1,000 to get the number of groups of 1,000. (12,000 ÷ 1,000 = 12) Then, we divide the net migrants by the number of groups of 1,000 to get the net migration rate. (36 ÷ 12 = 3) The net migration rate of Saguiaran in 1948 was 3 per 1,000; that is, for every 1,000 population in Saguiaran in 1948, there were 3 migrants who were added to the population. The population growth rate, then, of Saguiaran in 1948 is birth rate (43) + net migration rate (3) minus death rate (15) or (43 + 3) - (15) = 46 - 15 = 31. The population growth rate of Saguiaran for 1948 would be 31 per 1,000 or 3.1 per 100 or 3.1%.

Going back to our table, what is the trend of the rate of natural increase or population growth rate of Saguiaran from 1948 to the present? Compare the rate of natural increase in 1948 with the present rate of natural increase. If there is a big gap or difference between the birth rate and the death rate, what does this mean? (A high rate of natural increase) What does a high rate of natural increase mean? (Lead the students to bring out the ideas that a high rate of natural increase may mean more babies are born; that there will be many children; that many children will grow to adulthood; that there will be many young adults; that there will be many marriages; etc.)

In the beginning, you said that the population of our community has increased rapidly since World War II. Let us see if you are right by looking at the following table. What is this table about? What title may you give this table?

Annual Percent Increase of Population	Doubling Time (Years)
0.5	140
0.8	87
1.0	70
1.5	47
2.0	35
2.5	28
3.0	23
3.5	20
4.0	17

If the growth rate of a community is 1%, how long will it take the population to double? At our present growth rate of 2.8%, how long will it take the population of our community to double? (70 ÷ 2.8 = 25) If the doubling time of the population is 25 years, can you say that the population growth is rapid? Why?

D. Summing Up

From our foregoing discussions, what have you learned about the population of our community?

The students may give the following statements or similar ones:

1. The population of our community has rapidly increased since World War II.
2. This rapid population increase or growth has been brought about by the high birth rates and the low death rates.
3. If the present birth rate and death rate will continue, the population of our community will double in about 27 years.

E. Evaluation

The Population of Purak-an, 1948-1975*

Year	Population	No. of Births	No. of Deaths	Natural Increase in Population	Birth Rate	Death Rate
1945	10,000	514	178	336	51.4	17.8
1950	10,327	506	179	327	49.0	17.3
1955	10,659	508	176	332	47.7	16.5
1960	10,689	506	176	330	47.3	16.5
1965	10,724	503	168	335	46.9	15.7
1970	11,064	498	158	340	45.0	14.3
1975	11,389	498	153	325	42.0	13.4

*This is a hypothetical town.

A. Answer the following questions:

1. Which year has the highest natural increase in population?
2. Which year has the lowest natural increase in population?
3. In what year are there the fewest additions to the population?

4. Which years have the same number of births?

5. Which years have the same number of deaths?

B. Select the statement that agrees with the information in the table above.

1. The number of births and the number of deaths both decreased.

2. The yearly number of deaths is greater than the yearly number of births.

3. There is a yearly increase in the population despite the decrease in births.

4. Population also increases even if the number of births decreases.

5. Despite the small number of births, the birth rate increased.

6. When the number of births is greater than the number of deaths, the higher is the rate of natural increase in population.

Lesson 2

A. Objectives

1. Discuss and compare the age structures of a town and the nation.

2. Conduct a census study.

B. Opener

We have discussed the population size of our community over a number of years. We found out that the high birth rate and the low death rate in our community brought about the rapid population growth of our community. What do you think the effect of this rapid growth will be on the composition of our population?

If the students cannot answer the last question, restate the question this way:

Do you think there would be more males than females in our community if we had a rapid population growth?

Do you think there will be more children and young people than adults or old people with a rapid growth of population in our community?

Encourage the students to give their hypotheses or guesses to the questions raised. Tell them to prove their guesses. The following activity on population study may help them.

C. Development

Give the following assignment a day or two earlier as an exercise to understand the study of population. Explain that what applies to a small neighborhood or community may also apply to the nation as a whole. This activity will also enable students to gain a better understanding of the sex and the age structure or composition of a population.

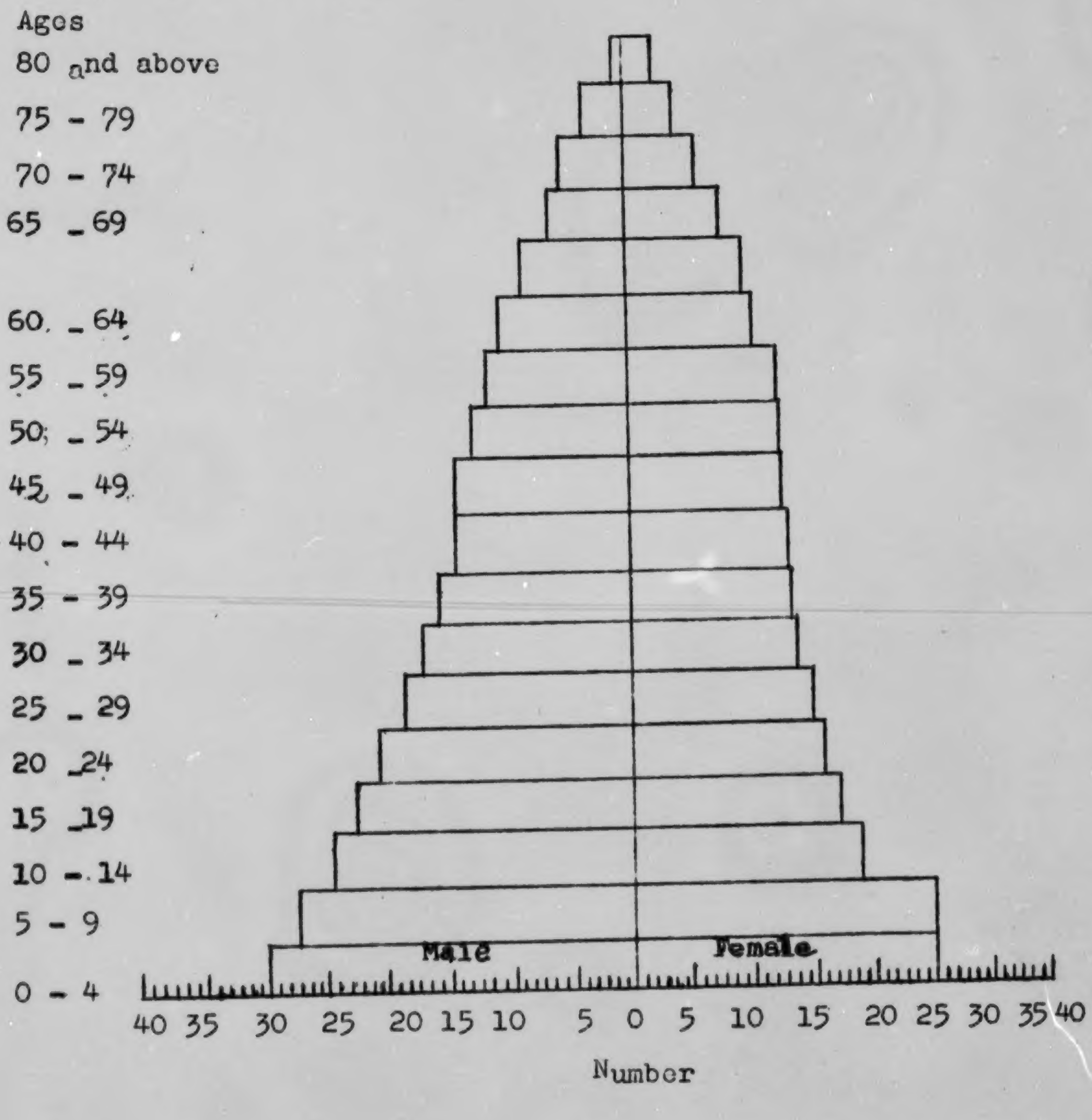
Ask the students to conduct a census on the school neighborhood. Specify the area where the census is to be conducted. Divide the area among the different groups of students who will conduct the census. Have each group conduct a house-to-house census, asking for the name, age, and sex of all members of each household with the exception of temporary visitors or boarders.

Check the result of the census conducted by the students on the school neighborhood. Instruct each group to tally the results of the census according to sex and age cohorts or age groups. Then ask the group to get the total of males and females for each age cohort. After the group tally, have the group leader work together to get the total number of males and females in the school neighborhood for each age group. The tally table for each group and for the whole class may look like the following:

A Census Study on the School Neighborhood

Age Cohorts	Males	Females
80 & above		
75-79		
70-74		
65-69		
60-64		
55-59		
50-54		
45-49		
40-44		
35-39		
30-34		
25-29		
20-24		
15-19		
10-14		
5-9		
0-4		

After the group leaders have tallied the results of their neighborhood census according to sex and age cohorts, have the students cooperatively graph the results. Indicate the different age cohorts on the vertical line and the number of persons on the horizontal line. Indicate male on the left side and female on the right side. Plot on the graph the number of males and the number of females for each age cohort. Start with the 0-4 age group. The graph may look like this:



What does our graph show? (The sex and age structure of the school neighborhood) What can you say about the shape of this age structure? (It's shaped like a pyramid.) Yes, that's why the age structure or profile of a population is oftentimes referred to as a population pyramid or age-sex pyramid. Which age cohort has the largest number of people? Which has the smallest? Are there more males than females in the age cohort with the largest number of people? In the age cohort with the smallest number of people? By looking at the shape of this age-sex pyramid, can you tell whether there are more males than females in the population? Let's look at the three lowest age cohorts. What do you call those people who fall under these cohorts? (Children and young adults) From what age to what age do they belong? They form the base of our age-sex pyramid. What does the broad base of this population pyramid imply? (That there are more children and young people than any other age group in this population.) Can you say then that the population of our school neighborhood is a young population? If this is a sample of the population structure of our community, which most likely it is, does this graph confirm your hypothesis that the rapid population growth of our community results in a young population, or in a population with more children and young people? Let us see how the age-sex pyramid of our school neighborhood compare with the age-sex pyramid of the whole country.

Present the age-sex pyramid of the Philippines. (Appendix A)

Look at this population structure. What do you notice about its base? What does the broad base imply?

How does the base of the Philippine age-sex pyramid compare with the base of the population pyramid of our school neighborhood? (It is possible that the population pyramid of the school neighborhood may not conform in shape to that of the whole country because of the small sampling used in the former.) What do you think a narrow-based population implies? What do you notice about the shape of the country's age-sex pyramid as it goes up? (It narrows.) Why? (Lead the class to discover that the reason is because the national growth rate is 3.01%.)

Can you consider a growth rate of 3.01% rapid? Does the population pyramid of the country show that the rapid population growth of the country produces a young population? How is this shown in the pyramid? Does this prove again our contention that rapid population growth caused by a high birth rate and a declining death rate results in more children and young adults?

Point out to the students that the national picture of the age structure of the population is also true in most, if not, in all the communities in the Philippines because the national age-sex structure of the population is only the sum total of the age-sex structures of the many small communities that make up the whole country.

D. Summing Up

To summarize the lesson, ask the students what ideas or concepts they have developed from their learning experiences. The students may give the following statements:

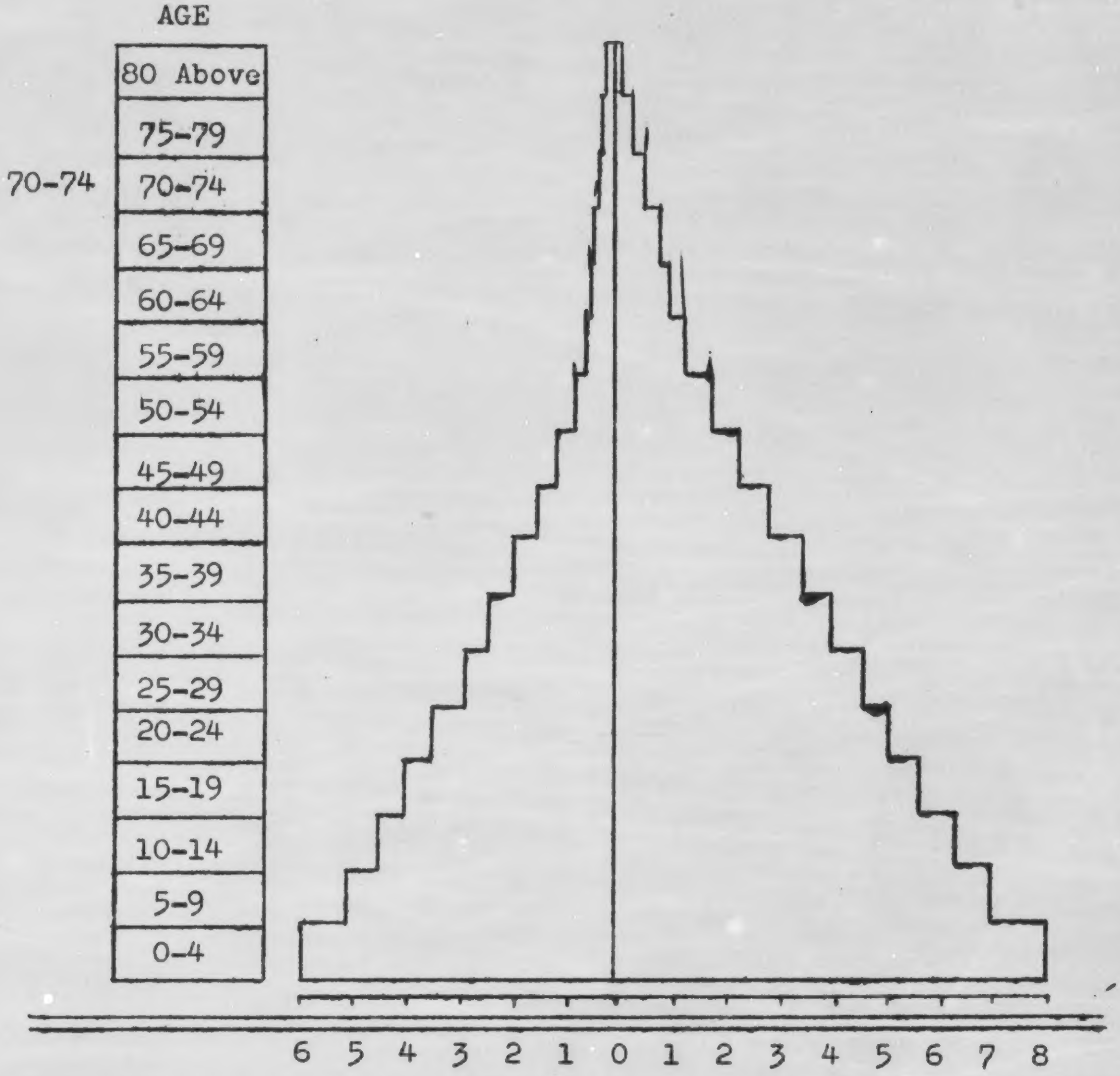
1. A rapidly growing population results in a young population.

2. A broad-based population pyramid implies that there are more children and young people in that population compared to any other age group.

3. Others

E. Evaluation

Shown below is the age-sex pyramid of a hypothetical town in Mindanao.



Sex-Age Pyramid of a Hypothetical Town in Mindanao

A. Study the pyramid and then answer the following questions.

1. Which of the statements below explain the pyramid.

   a. The population of the Mindanao town is young.

   b. Men equal women in every age group.

   c. The birth rate is high.

   d. The population below 15 years is greater than that of 15 to 29 years.

   e. More girls were born than boys.

   f. The Family Planning program has not gained a widespread acceptance.

   g. There are more people in the 40-44 age group than in the 15-19 age group.

Reminder for the teacher:

Sentences c, e, and f may not be selected to explain the pyramid. The students, however, must be able to support their answers. The following questions may be used as hints.

1. Does the pyramid show the number of births and deaths?
2. Is the shape of the pyramid determined by the birth rate?
3. Does the pyramid indicate that the family planning campaign is successful?

Lesson 3

A. Objectives

1. Discuss the implication of a high percentage of dependency.
2. Illustrate the relation between population growth and economic development.

B. Opener

Review the implication of a rapidly growing population on the age structure of a population. Then ask the following question:

What do you think the implications of a young population are for the economic growth of the community?

C. Development

Before we answer the above question, let us first find out what is meant by economic development. When can you say that a community is economically developed?

Bring out such answers as: When most people have profitable work or are gainly employed; when there are many industries or factories in the community; when there is plenty of food and other products produced in the community; when most people have adequate income and are therefore living decently and comfortably; when there are developed and adequate social services in the community such as good transportation, schools, postal services, health services; etc.

Who can recall our first question? Who would like to answer it?

The students might give the following answers:

A young population means that there will be more children to feed; more children to clothe; more children to send to schools. These will entail more expenses on the part of the family and on the part of the government in terms of such social services as health facilities, schools, recreational facilities, and others which have to be provided for these children and young people.

A young population also means that there will be many more people who will need jobs. Therefore, more job opportunities in the community have to be provided for these people, otherwise there will arise the problem of widespread unemployment. Many unemployed people will mean less taxes for the community. Less taxes will mean less government revenues or income. With less government revenues, there will be less money with which to provide adequate social services and less savings for investment. Less investment will mean less income for the government and less jobs for the people. A young population also means that there will be many more people who will live to adulthood. Therefore, many will marry and have many children who will eventually contribute to the rapid population growth of the community.

A community with a fast growing population will need more lands for housing and for food production. If more lands in the community will be needed for housing and other establishments to accommodate the increasing population, there will be a decreasing land area for food production. A decreased land area for food production may mean less food supply for the community, if production technology is not employed in the cultivation of land; etc.

Encourage the students to think of advantageous effects of a young population on the economic growth of the community. For instance, on the family level, many children might mean more helpers at home and on the farm, more children to earn for the family and to support their parents when these children grow up and get jobs or employment. On the community level, many young people may mean many hands to cultivate idle lands in the community and therefore, more food production. Many young people may also mean many workers for shops and factories and therefore, more production of goods, granting that these young people have the necessary skills for the available job openings and provided that there will be many such available jobs or employment.

> You made mention that a young population will mean many children to support. Let us illustrate this idea by taking the case of two families.

Present these two hypothetical families for illustration. Any two families in the community may be used for this illustration, however, care should be taken so as not to cause any embarrassment to anybody. To avoid offending the sensibilities of people, using hypothetical families is suggested.

Abbas Family

Father - farmer
Mother - teacher
Grandfather - Apo Siddik, 55 years old, unemployed
Grandmother - Apo Jubaira, 45 years old, unemployed

Children:

Hassim - 16 years old, 4th year high school
Abubalam - 14 years old, 2nd year high school
Aaron - 12 years old, Grade VI
Ebrahim - 8 years old, Grade II
Faisa - 5 years old, Kindergarten
Anisha - 2 years old

Hassan Family

Father - farmer
Mother - teacher
Grandfather - Apo Kiram, 64 years old, unemployed

Children:

Hadiguia - 16 years old, 4th year high school
Sitti - 14 years old, 2nd year high school
Hamid - 10 years old, Grade IV

How many members are there in the Abbas Family? In the Hassan Family? Who are the working or earning members of the Abbas Family? The Hassan Family? We have a term to call the working or earning members of a family or a community. Can you guess what it is? (Workers. Write this word on the chalkboard.) How many are the workers in the Abbas/Hassan Family? How many members are now working or earning in the Abbas Family? In the Hassan Family? There is a word which is used to call the family members or people who are not working or earning. Can you tell us what the word is? (Dependents. Write this word on the chalkboard.) How many dependents does the Abbas Family have to support? What about the Hassan Family? Who has a high dependency burden, the Abbas or the Hassan Family? Can you tell us the dependency ratio in the Abbas Family? (Write the term on the chalkboard.) Do you know how to compute the dependency ratio?

If nobody in the class can compute the dependency ratio, show on the chalkboard how this is computed by dividing the number of dependents by the number of workers. Thus, for the Abbas Family, divide 8 by 2 or 8+2 = 4. The dependency ratio of the Abbas Family is 1:4 (1 is to 4), that is, one working member of the Abbas Family has to support four dependents. Do the same computation for the Hassan Family.

> Which family has a higher burden of dependency? Why? If both families have the same income, which family will find it easier to support its dependents? Which family will find it more difficult to support its dependents? Why?

Lead the students to discuss the two families in terms of housing, food, education, health and other needs.

> If each family has a monthly income of ₱1,300.00, which family will have more chances to save? Why? What can the Hassan Family do with its savings? (The family may invest its savings in the education of the children who, when they graduate, may earn for the family. The family may use its savings as capital to open up a small sari-sari store from which the family may realize income or profits. The family may raise poultry or swine for additional income or it may deposit its savings in the bank to earn interests.) Do you think that invested savings like these will contribute to the economic growth of the family, in particular, and of the community, in general? How?

Let us look again at the age structure of our school neighborhood community. Let's consider the lowest age cohorts or groups. Who fall under these groups? (People ages 0-14 or those below 15 years of age.) How many people in our school neighborhood fall under these age groups? (0-4 = 30M + 28 F; 5-9 = 28 M+ 28 F; 10 - 14 = 26 M + 27 F. All in all, there are 167 people below 15 years in the school neighborhood.) Demographers or experts who study population consider those people dependents. (Write the age groups for dependents and opposite these the number of people under these age groups. Ask the class to get the number of people from 15 years to 64 years the way they did with the first three age cohorts, or, of expediency, they can just get the total number of people for these age cohorts from the class tally.

Taken from the graph, there are around 296 people from ages 15-65.)

How many people, according to our neighborhood census, fall within the age group 15-64? (Write the number of these people under the age bracket 15-64.) Demographers call these people the working or labor force in a population.

Ask the students to get the number of people under the age group 65 and above. Based on the age structure of the hypothetical neighborhood census, these are around 46 people.

People aged 65 years and above are considered by demographers dependents, too. (Add this age group to that below 15 years old.) How many dependents in all are there in our school neighborhood population? (213) If we want to get the dependency ratio in our school neighborhood, what should we do? (Divide the number of dependents by the number of workers, or, the number of workers by the number of dependents.) In this case, the latter is easier to compute. Thus, 296 ÷ 213 = 1.4 or 1:1.4, that is for every 1.4 worker, there is 1 dependent. Do you think that the workers in the community will find it more difficult or easier to support the dependent? Which community do you think has a better chance for economic progress - a community with a higher burden of dependency, or a community with a low burden of dependency? Why?

Present the Burden of Dependency Pictograph. (Appendix B)

Look at this pictograph. How many dependents does one worker in the Philippines have to support? What about in the United States? In Sweden? In which country will the workers find it easier to support their dependents? Why? Do you think that the dependency ratio in the Philippines is high compared to those of the United States and Sweden? What is the implication of this on the economic growth of the country? Is the dependency ratio in our community high or low?

D. Summing Up

Based on the foregoing discussions and illustrations what are the implications of a young population on the economic growth of the community, be this the local community or the national community?

The students may give the following statements:

1. A young population results in a high burden of dependency.
2. A high burden of dependency makes it difficult for the population of a community to save. This is because the more people there are to support the greater will be the expenses involved.
3. Less savings will mean less investment.
4. Less investment will mean less production, less employment, less income.
5. Less income will result in slow or low economic growth and development

E. Evaluation

Encircle the letter of the correct answer.

1. A high burden of dependency means that
    a. the employed is greater than the unemployed.
    b. those below 15 years comprise the biggest bulk of the population.
    c. the unemployed is greater than the employed.
    d. those aged 65 years and above compose the biggest bulk of the population.
2. When the dependency ratio of a family is high and the family income is small, it means that
    a. the income is more than adequate to meet the needs of the family.

b. the income is less than what the family needs.
c. the income is enough to meet the needs of the family.
d. many members of the family are employed.

3. The dependency ratio will be high when

   a. the population of a nation is young.
   b. the family is large.
   c. the birth rate is high.
   d. all of the above.

4. When the dependency ratio of a country is low,

   a. social services will be sufficient to meet the needs of the people.
   b. only a small business capital may possibly be collected.
   c. the economic development of a country slows down.
   d. a family loses hope to be happy.

Lesson 4

A. Objective

Explain the relationship between per capita income and economic development.

B. Opener

We learned from the previous lessons that rapid population growth affects economic progress. Now, we shall discuss the income of a person, the community and national income in relation to population and economic progress.

Do you know the measure used to determine the economic growth of a person, community or nation? (Per capita income) What does it mean? We shall know the meaning of this term after we have taken up the exercises in this lesson.

C. Development

Let us consider the Daud family and the Cosain family. Let us also, suppose that these two families have the same income.

Daud Family	Coassain Family
Father: ₱11,760 per year	Father: ₱11,760 per year
Mother: ₱ 5,040 per year	Mother: ₱ 5,040 per year
Children:	Children:
Linang Pandolangan Solaiman Basher Maimona Mangayao Asis Al-Muhder Sittie Phamy Khalicozaman Caban Abdul Roji } Dependents and unemployed	Farida Cosary Rasmia } Dependents and unemployed

What is the annual or yearly income of the Daud Family? (₱11,760 + ₱5,040 = ₱16,800) If we divide the annual income of the Daud Family by the number of persons in the family, how much will we get? (₱16,800 + 14 = ₱1,200). The per capita income of the Daud Family is ₱1,200. What is meant by per capita income? (Average annual income per person) Now, let us compute for the per capita income of the Cosain Family. The annual income of the Cosain Family is: ₱11,760 + ₱5,040 = ₱16,800. If we divide the annual income of the Cosain Family by the number of persons in the family, how much will we get? (₱16,800 + 5 = ₱3,600) Which family do you think has a better chance for economic progress? Why? Which is better, a low or a high per capita income?

Explain to the class that, on the other hand, because the Daud Family has more members, it might, after 10 or 15 years, earn a bigger total income than the Cosain Family. This is possible if the children of the Daud Family will be able to get a better education and, therefore, better paying jobs. Then ask:

What do you think will be the chances of the Daud children to get better education?

If we want to measure the economic growth or progress of our community, what measure shall we use? (Per capita income) How shall we compute the per capita income of the community? (Get the total income of the community for one year and divide this by the number of its population.) Yes, that's right. We have to know the total income of the community in a given year, or the total goods and services at market value produced in a year in the community and divide this by the number of people or population in the community. Do we know the total income or the total goods and services produced in our community for last year? (No.) Do you think it is easy to compute this? (No, computation of this is a complicated process. Only economists have a way of doing this computation.) Can we compute, then, the per capita income of our community? (No.)

Since we don't have the data for the total income of our community, we will talk about the per capita income of our country to clarify this concept. Economists have a name for the total national income or the total number of goods and services produced in a given year in a country. They call this Gross National Product or GNP, for short. In 1970 (get the latest available data on GNP), the Philippines had a GNP of ₱29 billion and a population of 37 million. How can we find the per capita income of the Filipinos?

$$\text{Compute:} \quad \frac{29{,}000{,}000{,}000}{37{,}000{,}000} = \text{per capita income.}$$

The per capita income therefore was around ₱760 in 1970. How much would this be per month? What could be the consequences of a very low per capita income? Why do you think we have a low per capita income? (The rapid population growth rate of 2.69% of the Philippines in 1978 can be presented and its relation to the per capita income and economic growth of the country discussed.)

At this juncture, it can also be pointed out that the per capita income is only a crude measure or indicator of a country's economic growth. Especially here in the Philippines, we have many services at home which are given free and are, therefore, not valued at market price. In the computation of GNP, all these free services are not included and so our GNP is, in most cases, underestimated. On the basis of this, the resulting per capita income is likewise or real picture of the country's economic progress. However, in the absence of a more accurate measure, we have to be satisfied with the per capita income as a measure of economic growth until economists can come up with a more reliable and accurate measure.

If some 18 million births (1/2 of the 1970 population) were averted before 1970, how would this have affected the per capita income of the country? What would be the implications of this situation in terms of our standard of living?

The discussion should lead the students to realize that everyone of the 18 million existing Filipinos (the other half of the 1970 population) would normally enjoy twice as much per capita income and, therefore, a standard of living twice as high as the present one which leaves much to be desired.

On the other hand, if the population today were 1/2 its present size, would our GNP reach its current level? Do you think production would be as high as its level today? (The possibility that a decreased population may also decrease total production can be pointed out because of the likelihood that families with fewer children might be less motivated to improve their production.)

Let's go back to our community. Based on your experiences and on your observations of the people's standard of living, can you say that we have a high or a low per capita income in our community? If the rate of population growth in our community will be lessened, what do you think the effect of this will be on the total production? On the per capita income? On the economic growth of the community?

D. Summing Up

Guide the students to sum up the ideas developed in the lesson. Then ask!

What can you say about population growth and per capita income?

Lead the students to express the following statements or similar ones:

1. Rapid population growth may either increase or decrease per capita income.
    a. Less increase of production in a rapidly growing population will mean less per capita income and, therefore, slow economic development.

b. If large families will be motivated to increase their productivity, there will be a higher per capita income and, therefore, fast economic growth.

Guide the students to sum up the ideas in the whole unit. Then ask:

What can we conclude from the study of the unit?

The students may formulate statements or conclusions similar to the related ideas for the lessons which should be written on the chalkboard as they are given.

Looking at these related ideas or conclusions, what generalization can you make out of all those conclusions or related ideas?

The class may give the following or similar generalization:

Rapid population growth affects the economic development of a community.

E. Evaluation

Answer the following:

1. What is meant by per capita income?

2. Explain gross national product or GNP.

3. In what way is per capita income related to economic growth?

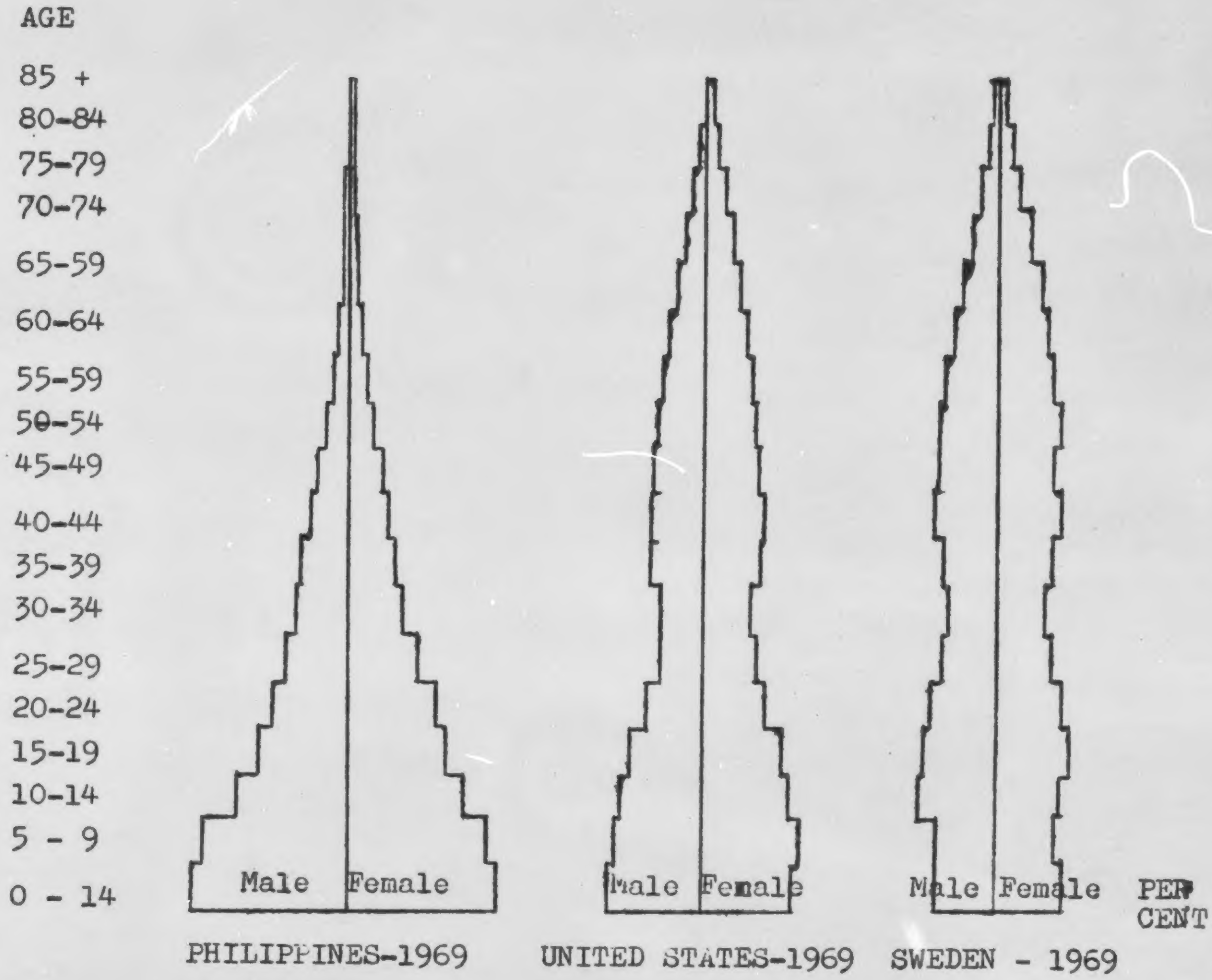
4. Explain these statements.

   a. A high per capita income hastens economic growth.

   b. Family size affects the per capita income.

IV. EVALUATION

A. Study the population age structures below. Then underline the letter of the correct answer for each of the succeeding questions.



1. What does the broad base of the Philippine population structure mean?
   a. The population is stable.
   b. There are many young people in the population.
   c. There are more people who die in their adulthood.
   d. Young people are the foundation of a country.

2. Which country has the least number of people between the ages of 0 and 14?
   a. Philippines
   b. United States
   c. Sweden
   d. None of the above

3. Which age group in the Philippines has the biggest number of people?
   a. 0-4
   b. 5-9
   c. 10-14
   d. 15-19

4. In which age group in the United States are there no males or practically no males?
   a. 30-34
   b. 85 and above
   c. 80-84
   d. 25-29

5. Which country has the smallest population between the ages of 80 and 85?
   a. Philippines
   b. Sweden
   c. United States
   d. None of the above.

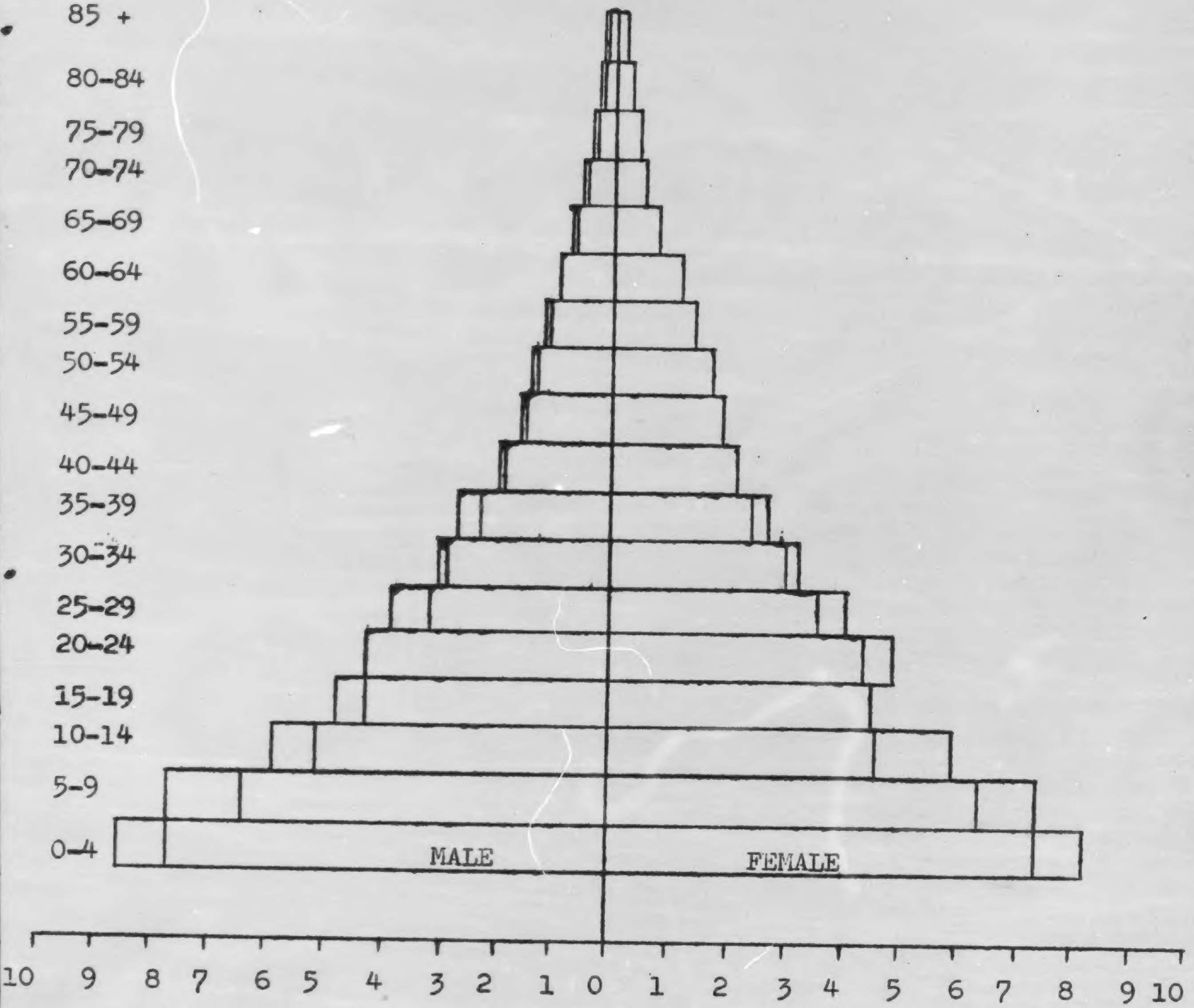
B. If a rapidly growing population means a young population, cam you discuss what would be the effect of this situation on the use of food, clothes, shoes, etc.; on the school; on job opportunities; on the standard of living; and on social services?

Write your ideas and thoughts in one or two paragraphs based on your discussions. Give a title to your composition, like: Effects of RPG on Job Opportunities, etc.

Key to Correction for A:

1. b
2. c
3. a
4. b
5. a

APPENDIX A

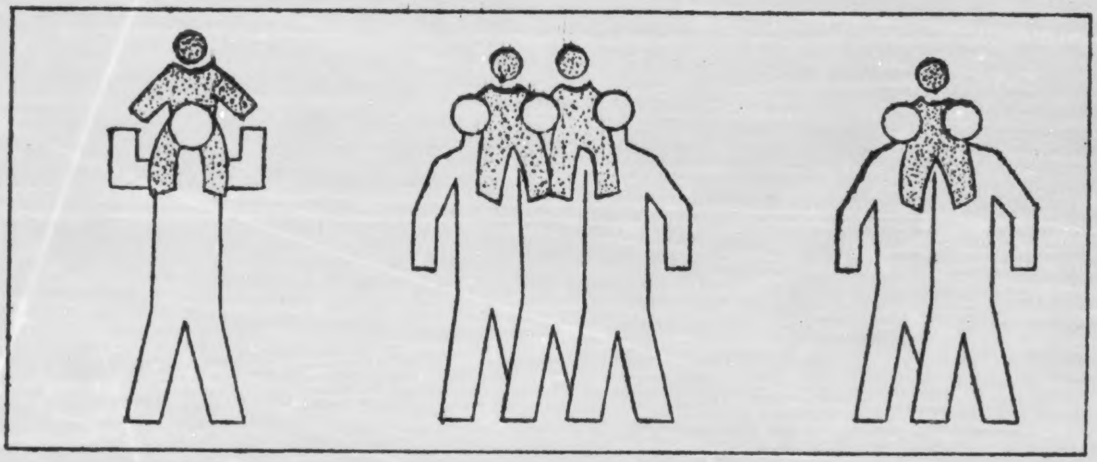


YOUNG POPULATION
PHILIPPINES, 1971

Source: U.P. Population Institute, Philippines - Profiles, Problems, Prospects (Manila: Population Institute, U.P. Systems, 1974), p. 24.

APPENDIX B

BURDEN OF DEPENDENCY



UNITED STATES
1970

PHILIPPINES

SWEDEN

SOURCE: U.P. Population Institute, Philippine Population - Profiles, Prospects, Problems (Manila: Population Institute, 1970), p. 24.

APPENDIX C

Jolo - Yesterday and Today

Before the outbreak of World War II, Jolo was just an ordinary place. Jolo then was sparsely populated. Its inhabitants were composed of the Tausog, Samal, Badjao, Chinese, and Christians. The Chinese made up fifteen percent of its population and the Christians five percent. Most of the Christian residents of Jolo were either soldiers or government employees.

The Chinese lived in the town, while the Christians resided in public buildings erected by the Americans a considerable distance away from the shores. Fortlike, these buildings were surrounded by a bulwark of cemented walls. On the other hand, the Tausog built their homes along the shores since they derived their livelihood partly from the sea. Aside from fishing, they also engaged in trade and agriculture. On their part, the Tausog women passed their time by engaging in cottage industries like sewing and handicraft making. The Samal and the Badjao, however, lived in nearby islands.

Many changes took place in Jolo after the Second World War, especially in its demography or population. As the population grew, the economic development of the place followed. More houses were built and more schools were put up to meet the housing and education needs of the growing population. Business and trade became brisk. The kumpit and the vinta were soon replaced by motorized bancas. The trade with Borneo flourished and proved beneficial. Indeed, business and commerce picked up and became lucrative.

Harvests increased. Many products like copra and hemp as well as fruits were sold to neighboring places. This helped greatly in the development of Jolo. Exporting cottage industry products to Borneo established Jolo as a business center.

By mid-1970, Jolo gained prominence. Socio-cultural activities and politics became focal points of interest. Madrasa schools were established to hasten the propagation of the Islam faith and to make it widespread. In fact, many adherents also went to Arabia to study Islam. In this way, Islam became firmly implanted in the people's life.

The fast economic growth of Jolo brought into play the instinct of self-preservation. Consequently, the people bought arms to protect themselves. This state of things admittedly affected the life of the Tausog as Jolo became a troubled land. Because of this, the Tausog banded together and settled in one place. They then built homes by the sea and on the shallows as well. These homes could be reached by means of bamboo bridges that linked them together. Because of the prevalent internal trouble, many of the residents abandoned Jolo to live in other places.

Before martial law (P.D. 1081) was proclaimed, abuse of firearms was so rampant that the people, feeling hopeless, had to leave for other places. The population of Jolo abruptly decreased. As the population decreased, the economic growth slowed down. Apprehensive that economic products might fall into rebel hands, the government stopped its external trade.

At present, Jolo is relatively peaceful. Its population is again increasing. Life is also becoming better. Hopefully, normalcy and peace will be completely restored in Jolo.

APPEMDIX D

Marawi From 1972-1978

Marawi is widely known as the City of Golden Hospitality. It is a great commercial center to the Maranao and the Muslims living in the environs of Lake Lanao. Business enterprises are mostly in the hands of the Chinese and Christian capitalists.

In 1972, trouble broke out in Marawi. Skirmishes were fought right in the heart of the city. This intermittent fighting made a heavy toll on the population. For about a month, only soldiers as well as a few civilians inhabited the city. When normal life was restored, the army undertook a vigorous campaign to encourage the people to return to the city. Eventually, they returned.

As the government worked at maintaing the relative peace and order within the city, the arena of active fighting shifted to the towns. This induced the people to move to the city. Migration then caused the population of Marawi to increase.

A landmark in Marawi's history is the establishment of the Philippine Amanah Bank. This bank was put up according to Islam tradition governing banks. With the help of this bank, the Maranao were able to secure sufficient capital for business venture. In a short time, business became controlled by the Maranao. Tourists as well as businessmen from neighboring towns and provinces came and visited Marawi. Businessmen from other places migrated to Marawi. The Population then grew rapidly.

The growth of Marawi's population is indeed remarkable. This is due to three reasons. First: Marawi is a commercial center. Two: More than 2,000 workers were recruited by the National Power Corporation when the Agus River was developed as supplier of electricity. Third: The prevailing trouble in certain areas in Mindanao induced many people to migrate to Marawi. As a result, businessmen and farmers settled in Marawi, but the great bulk of the population remained Maranao.

A POPULATION EDUCATION UNIT IN SOCIAL STUDIES

Second Year - Population Issues

Conceptual Theme: The Nation
Concept : Social Organization
Sub-Concept : Social Control
Generalization : The experiences and needs of society serve to direct and control present social behavior.
Suggested Time Allotment: 5 - 6 class periods

OVERVIEW

The main thrust of this unit is to provide the student with opportunities to develop his thinking skill in weighing the pros and cons of population issues through participation in class discussions, informal debates, and other forms of informal group discussions, such as buzz and brainstorming sessions. He takes one position on an issue, and in the process of supporting his stand, he inevitably does some synthesizing of facts, ideas, and concepts about population situations in his family, community, country, and the world.

In this learning context, the teacher's major role is to stimulate issue-centered discussions and to encourage the students to develop ideas and positions on population issues and publicly defend them. More specifically, the teacher is conceived of as a catalyst, i.e., confronting the student with inconsistencies or conflicts in his own beliefs and practices and those of his society regarding births or no births, small or large family size norms, and the consequences of these on their behavior. The teacher is a pursuer of discussion, giving stimulating questions and constantly taking the opposite view of either side of an issue, rather than try to arbitrate or make decisions for the students.

The issues for discussion and debate are ideas and statements of demographers, sociologists, economists, and other social scientists. It would be both interesting and challenging to include also the views of local authorities and layman, e.g., those of school officials, barangay chairmen, mayors, governors, and judges, or those of a farmer, a laborer, a storekeeper, and a housewife.

In terms of content, this unit deals with population situations, issues, and problems. This unit shows how these situations, issues, and problems serve to direct and control people's behavior in order to meet present realities and needs. Since this unit develops the concept of social control, it can enrich the unit on social organization under which the sub-concept, social control, is subsumed. Hence, it is suggested that this population education unit be taken up after the unit in Social Studies on social organization.

The exercises in this unit may be used to discuss Chapter XI of the Social Studies text prepared by the Social Studies Center - EDPITAF, especially in discussing the essays "The National Policy and the Dignity of Man" and "The National Policy and the Equality of Man."

The teacher is given the leeway to decide and choose the lesson which she feels will effectively carry out the objectives.

I. OBJECTIVES

A. General

1. After synthesizing the background information about the population situation in the Philippines, the learner shall be able to assume a position when confronted with conflicting views or opinions about population issues.

B. Specific

1. Discuss how social values encouraging large family size tend to be in conflict with the realities of present-day population situations.

2. Cite cases where individual values are in conflict with societal values.

3. Point out that man shares the world's resources with other men and other living things.

4. Explain how rapid population growth upsets the balance in the ecosystem.

5. Discuss the effects of rapid population growth on the economy of a country.

6. Realize that population control is the concern of citizens of every country by:

   a. Reading articles and viewing movies on population situations and problems.

   b. Discussing with friends the population situation of the country and of the world.

   c. Sharing with parents and neighbors information acquired about the need to limit family size.

   d. Informing parents and neighbors about the function and services of the family-planning clinic.

7. Show improvement in:

   a. Interpreting population data.

   b. Accepting or rejecting an opinion and giving plausible reasons to support one's position.

   c. Supporting convictions.

   d. Working with groups.

II. CONTENT

A. In terms of topics

1. Demographic Situations in the Philippines

2. Sociological Determinants of Fertility: Philippine Beliefs, Laws, and Practices

3. Some Consequences of RPG

4. Controversial Population Issues

B. In terms of related ideas

1. Societal values encouraging large family size tend to conflict with the realities of present-day population situations.

2. Individual and societal values sometimes conflict.

3. Man shares the world resources with other people and other living things.

4. Rapid population growth upsets the balance in the ecosystem.

5. Rapid population growth affects the socio-economic development of a country.

6. Population control is the concern of citizens of every country.

III. SUGGESTED PROCEDURE

Lesson I

A. Opener

Present the following articles, books, or book covers, if possible. If not, write on the chalkboard their titles and authors. Elicit reactions.

The Population Bomb: Who Will Define it?
by Paul R. Ehrlich

The Cancer Called Man by Isaac Asimov

A New Look at Our Crowded World by Maxwell
S. Stewart

"Population and Production: Twin Problems"
by Rodolfo G. Tupas

"The Race Between Foods and Population" by
Cecilia A. Florendo

"Wanted: A Plan on Population" by Ben Lara

"Need for Population Control in RP Cited"
by Dell H. Grecia

What do all these titles and authors convey to you?

One possible answer is: "There is a population problem." There might be other answers. Guide the students to select one to discuss first.

Do you agree or disagree with this assumption or statement?

During our lessons on the present unit, you will be exposed to various and conflicting opinions about population facts, ideas, and concepts in the Philippines and other countries. We are expected to do three things: (1) organize basic facts, ideas and concepts on population situations to prepare you to (2) discuss controversial issues, take a stand on an issue and support your position, and (3) make a decision or conclusion on the basis of your discussions.

Let us find out if the Philippines has a population problem.

B. Development

1. Present and discuss with the class the following topics or concepts concerning the population in the Philippines. Most, if not all, of these concepts and topics have already been introduced in the elementary grades and in the First Year High School Social Studies units. However, a review discussion of these topics and concepts is necessary.

    a. Population age structure
    b. Completed family size
    c. Per capita income
    d. Rapid population growth
    e. Population density
    f. Effects of RPG on the ecosystem
    g. Effects of RPG on the economy
    h. Continuous observance of the Muslim custom to marry early.
    i. A muslim's decision regarding family size should be made according to his customs, traditions, and beliefs.

j. To the Filipino Muslim, Family planning is genocide.

To the teacher:

Make issues h, i, j the subject of an informal debate.

2. Guide the class to use the graphs and charts in the Appendices in the class discussions.

For example, in discussing the population age structure and the dependency burden in the Philippines, present the Population Age Structure Graph (Appendix A, p. 53) and ask questions similar to the following:

What can you say about the age-sex pyramid of the Philippines? What does a broad-base pyramid suggest? What percent of the Philippine population is under 15 years of age? (47%) How does this compare with those of the United States and Sweden? What percent of the Filipinos is 65 years old and above? (Less than 3%) What do we call the population below 15 years and 65 years and above? (Non-workers or dependents) How many percent of the Filipinos belong to the 15 to 64 years age bracket? (less than 51%) What do we call this portion of the Philippine population? (Workers or working age members; productive members) What then is the dependency burden in the Philippines? How does this compare with those of the United States and Sweden? (Show Appendix B.) Why do we have a high dependency burden? What accounts for the young age structure of the Philippine population? (High birth rate and low death rate; Philippine birth rate is around 43 per thousand; death rate is around 12 per thousand; annual population growth rate is around 3%) What can be the causes of the continuing high birth rate in the Philippines?

To clarify and answer the last question, review Filipino values that encourage large family size by conducting the following discussion:

What is the average family size in the Philippines? (5.9 or 6 children) How does our average family size compare with that of U.S.? (2.5 children) With that of Japan? (2.2 or 2 children) With that of Malaysia? (4.6 children)

What could be the reasons why we have a large family size in the Philippines? (We have many beliefs, practices, and laws that favor large family size. See Appendix B, p. 54) Can you give examples of beliefs that favor large family size? (The more, the merrier; children are the blessings of God; children are the security of parents in their old age; etc.) Can you cite some practices that encourage large family size? (Giving of awards by schools or civic organizations to parents who are successful in bringing up and educating their many children; practice of some schools to give special privileges such as matriculation discount, if there are many brothers and sisters enrolled in the same school; giving of substantial family allowances, increasing with each additional child by some private firms, etc.) Can you think of some laws that favor large family size? (The law granting maternity leaves with pay to female government employees; laws restricting a couple's choice of birth control methods such as induced abortions; etc.)

Ask the class what they think are the effects of too many large families on the population of the Philippines. (Causes rapid population growth)

What do you think the effects are of rapid population growth on the Filipino diet?

Have the students tell what they know or assume about this. To make the students understand this effect of RPG on food, have them role play a dinner scene. Then show the chart on the "Quantity and Nutritive Value of Foods Concumsed Per Capita Per Day in the Philippines Compared to Recommended Allowance". (Appendix C, p. 55).

What is this chart about? What are the kinds of foodstuffs being consumed or eaten in the Philippines? What do the other columns in the chart represent? What do you understand by per capita? (Per head or per person) Which among the foodstuffs are eaten in sufficient quantity by an average Filipino? (Cereals, some fruits, and vegetables) Which foodstuffs barely meet the recommended allowances per day for the average Filipino? From the information in this chart, can you say that the average Filipino is eating sufficient amounts and the right kinds of food? What could be the effect of insufficient food on the health of the people?

3. Discuss the effects of rpg on food production. Then show the graph on "1968-1970 Food Production Increase Necessary for Balanced Diet". (Appendix D, p. 56)

   What is the title of this graph? By how many percent should the cereal production increase to achieve the balance between increased Philippine population and food production requirement in 1968-1970? What about the fish and poultry production? The milk production? The beans and fats production? The fruits and leafy vegetables production? If the Philippine population is not growing rapidly, do you think that there would be a need for increasing the production of cereals, fish, and poultry, milk, beans, fats, fruits, and leafy vegetables? (There would still be a need because present production level is not yet sufficient to meet the recommended allowance of food for each Filipino, however, if the population growth is not as rapid as it is now, production increase would be lower than what is presently needed.)

   What are the effects of RPG on the labor situation of the country?

Bring out the facts that young people in increasing numbers will be flooding the labor market over the next decade; that for every person who drops out of the labor force each year due to either death or retirement, 14 youngsters are waiting to replace him; that if the country is to provide employment for all those who will be looking for jobs, the number of presently available jobs will have to be more than tripled by the year 2000. (Read Appendix E, p. 57.)

4. Discuss the effects of rpg on the school by asking the following questions:

   What will be the effects of rpg on school enrollment? On the number of teachers, school health workers, school sites, school buildings, desks, textbooks, and school equipment and supplies? On the quality of instruction?

5. If the increase in total value of goods and services produced in a given year (GNP or Gross National Product) cannot keep pace with the rapid population growth of the country, what will be the effect of this on the per capita income (per person income)?

Show the "Per Capita Income, 1969" graph (Appendix F, p. 58) and have the children compare the per capita income of the Philippines with that of other countries.

6. Have the students also take up the relationship of rpg and land area by discussing the chart on "Hectares of Land Per Person, Philippines, 1591-1970", (Appendix G, P. 59).

In which year did the Philippines have the least number of people? As the years passed what happened to the Philippine population? As the population of the country continuously increased, what happened to the hectares of land per person in the Philippines? How does rpg affect population density?

Present the chart on "Additional Annual Resources Required To Maintain Present Living Standards", (Appendix H, p. 60).

How many sacks of rice are needed yearly to maintain present living standards? If we want to raise our present standards of living, what will happen to our yearly need of rice, houses, new jobs, health expenditure, rural health units, and other government services such as transportation, postal service, etc.?

Do you think our country has enough resources or money to meet adequately all the needs of its fast-growing population?

7. Finally, discuss the effects of rpg on the ecosystem. See Background Information for Teacher (BIT) for the article on this.

8. Call on the students previously assigned to read the articles on "Population and Production: Twin Problems", (Appendix I, p. 61), "Contrary Views on People", (Appendix J, p. 66) and President Marcos' Speech, (Appendix K, p. 71) to give their reports on these articles. After each report, have the class discuss it. Encourage the students to ask questions or classifications regarding the reports. In case salient points are missed, ask questions on these to bring them to the attention of the students. For example, such questions as "What opposing views are presented in the report on Contrary Views on People? What have we learned in the other units about our natural resources? What does the article say about

population and production? What do we know about our needs? What is the President's view on the population problem? What message does he convey to every Filipino?"

Suggest to the class to invite an agriculturist, a forestry expert, or a manager of the National Power Corporation who can discuss extensively the current state of production.

Lesson 2

A. Opener

After having exposed the students to different information and viewpoints on the Philippine demographic or population situation, ask them again if they think that the Philippines has a population problem and to support their answers. The students may not come up with a consensus. It is perfectly all right if they still express divergent views on the matter of Philippine population situation as long as they can give valid reasons for their stand.

B. Development

1. Brainstorming Session

Divide the class into two groups - one group which maintains that there is a population problem and the other group which maintains that the country has a production problem. Have the groups conduct a brainstorming session - the first group to think of solutions to the population problem and the second group to suggest solutions to the production problem.

At the beginning of the brainstorming session, a recorder is appointed to take down all the suggested solutions or ideas. The students understand in advance that they can offer any idea that comes into their minds on the problem under consideration - the wilder the ideas, the better. Often, impractical suggestions may "trigger" off other students' practical suggestions that might not otherwise occur to them. Criticism of the ideas offered is not permitted during the brainstorming session. The greater the number of ideas, the greater the possibility that some really excellent ones will come up.

Reconvene the class after fifteen minutes. Have the recorder of each group report on the solutions to their particular problem. It would be better if the recorder writes the solutions on the chalkboard so that the class can screen and appraise these better. They can combine some ideas and improve or eliminate others. They may evaluate their positions and come up with some tentative conclusions.

2. Buzz Sessions

Have the class conduct buzz sessions to discuss the question "How can you help carry out or implement the solutions you have suggested?"

To conduct the buzz session, divide the class into small groups of from four to six members and give the buzz groups from ten to fifteen minutes to discuss the question under study. At the end of the session, the recorder of a buzz group reports his findings or ideas to the class. He may write or have someone write the summary report on the chalkboard. To avoid repetition, ask the other buzz groups which ideas of the first group are similar to their ideas. Tell them to report only these ideas which have not been mentioned by the previous reporters.

3. An Informal Debate

Assign the class to gather opinions and statements in preparation for an informal debate. Examples of such opinions and statements are given below.

a. Married couples have the right to have as many children as they can afford.

b. One way to control pollution is to control population growth.

c. "Man, by procreating rapidly, is threatening with extinction the other forms of life on earth, so that, eventually, by multiplying rapidly, man will be destroying himself."

d. The government should limit the number of children that a couple should have to control rapid population growth.

e. A small family is better than a large family.

f. Muslim families should be allowed to have many children. (Appendix P may be used as guide on this activity.)

Issues or quotations other than those listed above may be added to the list or may replace some items in the list. Have the class decide which two issues they would debate on first.

Ask the class if there are words in the different statements which they do not understand. Explain and illustrate the meaning of these words.

Explain the set-up of the informal debate. Divide the class into two big groups: one group to tackle one issue and the other group, the remaining issue. Let each group select the speakers who will take the negative side, and those who will take the positive side. A member from the other group refutes this argument or gives an opposing argument. Members of the two groups take turns arguing in favor of or against the position statement until the arguments of both sides are exhausted. If the debate becomes dull and does not prosper because the debaters are having difficulty expressing their ideas in English, allow them to conduct the debate in their native language.

After the two debating groups have finished giving the pros and cons of the position statement, have a general discussion to analyze each argument to find out to what extent they are justified or not, and to see which are strong or weak arguments.

C. Statement of general ideas (Summing Up)

Guide the students to state their ideas which may be similar to the following:

1. Societal values encouraging large family size tend to conflict with the realities of present-day population situations.

2. Individual and societal values sometimes conflict.

3. Man shares the world resources with other people and other living things.

4. Man's rapid population upsets the balance in the ecosystem.

5. Rapid population growth affects the economy of a country.

6. Population control is the concern of citizens of every country.

IV. EVALUATION

1. Write your opinion in at least two paragraphs about this statement:

   "Rich couples have the right to have as many children as they can afford."

   When a few students have read their opinions, the teacher may steer the discussion in such a way that a negative stand on the above statement is also expressed because the more altruistic or unselfish motive is to think of the welfare of the nation first, not just one's personal interest. Even if a rich couple can afford to have many children, these children, like the children of the poor, would add to the growing number of consumers of essential goods, such as rice, fish, etc.

   Although the above topic is preferable, the teacher may also use any other controversial topic. The thing being tested or measured here is not so much the facts or information that the children can give as the skill in taking a stand and defending this stand or position with plausible reasons or evidences.

2. Divide the class into 4 groups, each group to represent lawmakers. Say:

   If you were a lawmaker of a country, what laws would you pass to control rapid population growth? Prepare 2 or 3 laws but be sure they are good ones.

   After laws have been written, each group leader presents the laws prepared by his group to the class for discussion. These guide questions may be considered:

   1. Is the law sound?

   2. Does it not impinge on the personal rights of the individual?

   3. Will it be acceptable to the people?

3. Self-Rating Scale

   Read the following statements about yourself. Put a check after the word which reflects correctly your answer to the question.

   1. Do I study the pros and cons of a population issue before coming up with an opinion?

      Always ___ Often ___ Sometimes ___ Never___

2. Do I take a stand on an important population issue and give valid reasons for my choice?

Always ___ Often ___ Sometimes___ Never___

3. Are my decisions made on the basis of discussions made on the pros and cons of of the issue?

Always ___ Often ___ Sometimes___Never___

4. Do I argue and discuss population problems objectively?

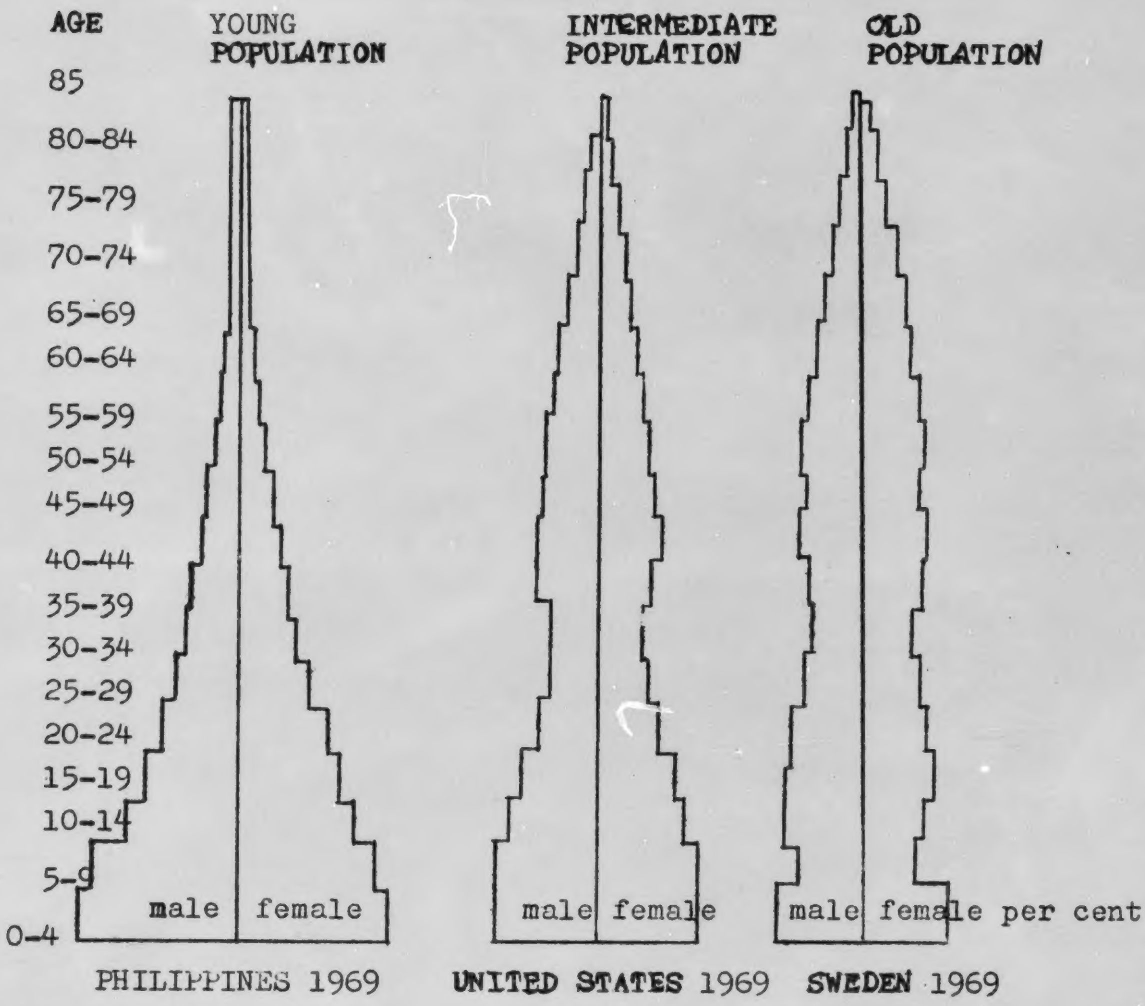
Always ___ Often ___ Sometimes ___ Never ___

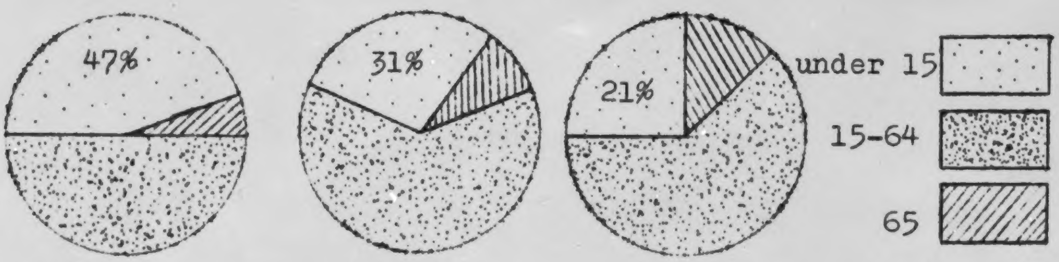
5. Do I gather and organize facts, ideas, and concepts on population situations so that I can discuss intelligently controversial population issues?

Always ___ Often ___ Sometimes___Never ___

APPENDIX A

POPULATION AGE STRUCTURE

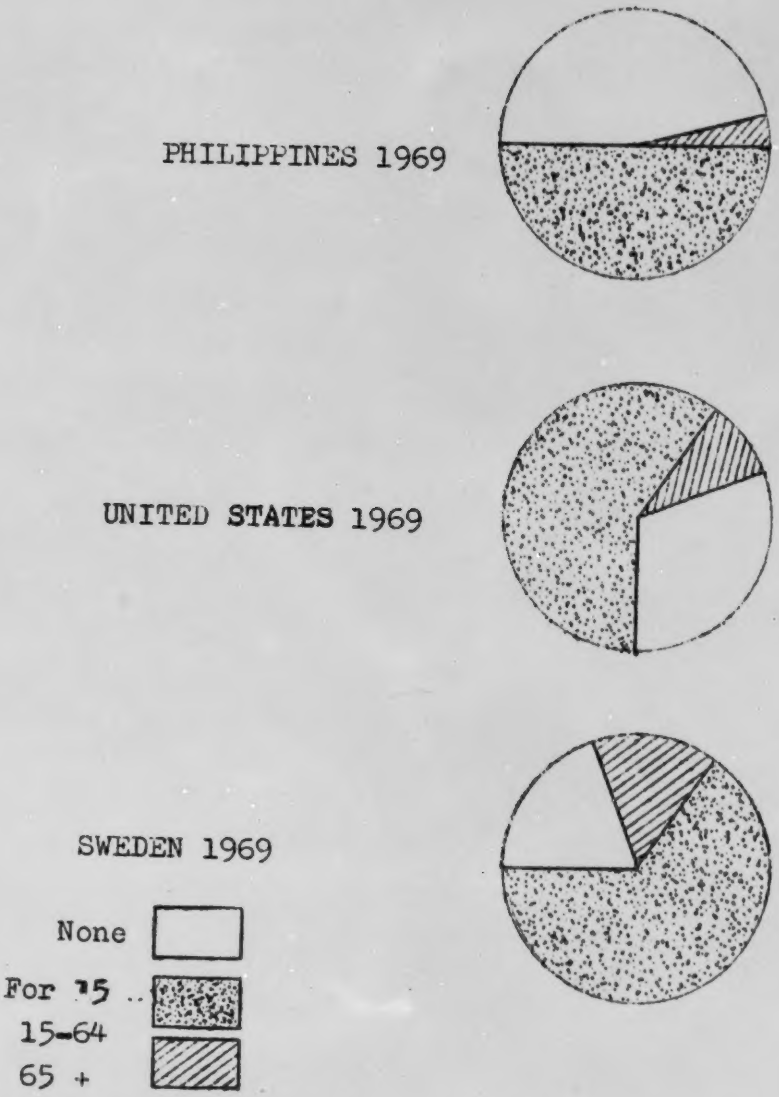




SOURCE: U.P. Population Institute, Philippine Population - Profiles, Prospects, Problems (Manila: Population Institute, 1970), p. 22.

APPENDIX B

POPULATION AGE STRUCTURE



SOURCE: U.P. Population Institute, Philippine Population - Profiles, Prospects, Problems (Manila: Population Institute, 1970), p. 22.

APPENDIX C

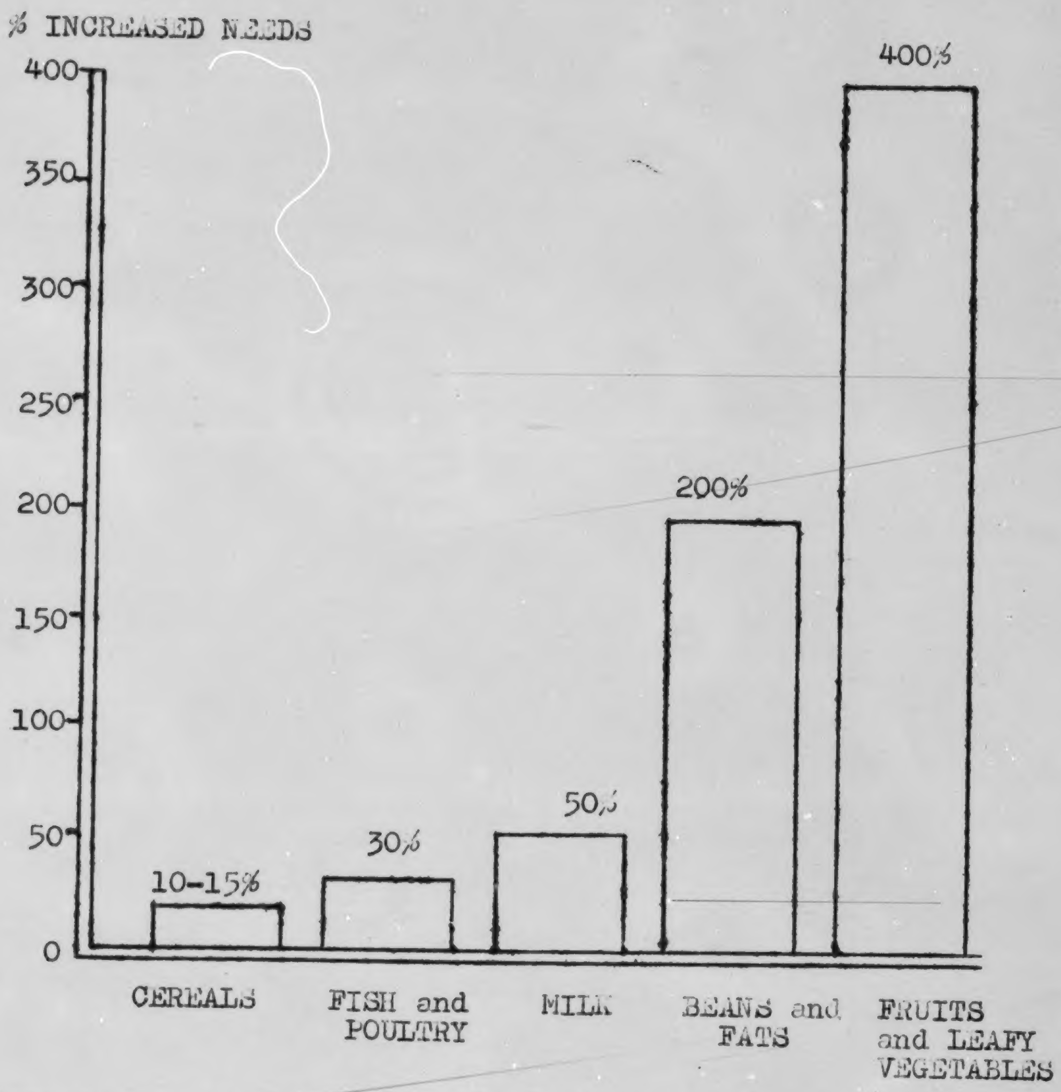
QUANTITY AND NUTRITIVE VALUE OF FOODS CONSUMED PER CAPITA PER DAY IN THE PHILIPPINES COMPARED TO RECOMMENDED ALLOWANCE

FOODSTUFFS	PER CAPITA FOOD INTAKE (Grams/Day)	RECOMMENDED ALLOWANCES (Grams/Day)	PERCENT SUFFICIENCY
Cereal	334	318	105.0
Starchy Roots	55	70	78.6
Sugar	19	33	57.6
Pulses (Peas and Beans and Nuts	8	20	40.0
Leafy & Yellow Vegetables	17	68	25.0
Vitamin C-Rich Foods	26	87	29.9
Other Fruits & Vegetables	93	94	98.9
Meat, Fish & Poultry	75	108	69.4
Eggs	5	14	35.7
Milk & Milk Products	26	168	15.1
Fats & Oils	7	29	24.1

SOURCE: M.B. Concepcion, ed., Philippine Population in the Seventies, 1969.

APPENDIX D

1968-1970 FOOD PRODUCTION INCREASE NECESSARY FOR BALANCED DIET



SOURCE: U.P. Population Institute, Philippine Population: Profiles, Prospects, Problems (Manila: Population Institute, 1970), p. 68.

APPENDIX E

THE LABOR MARKET

Young people in increasing numbers will be flooding the labor market over the next decades.

> Even if the birth rate were to decline precipitously in the near future, those who will attempt to join the labor force within the next 15 years have already been born.
>
> For every 4 persons who drop out of the labor force each year due to either death or retirement, 14 youngsters are waiting to replace them.
>
> Because of a low birth rate and an old age composition only 7 youngsters wait to replace every 4 persons who leave the labor market in Sweden.

If the economy is to provide employment for all those who will be looking for jobs, the number of presently available jobs will have to be more than tripled by the year 2000.

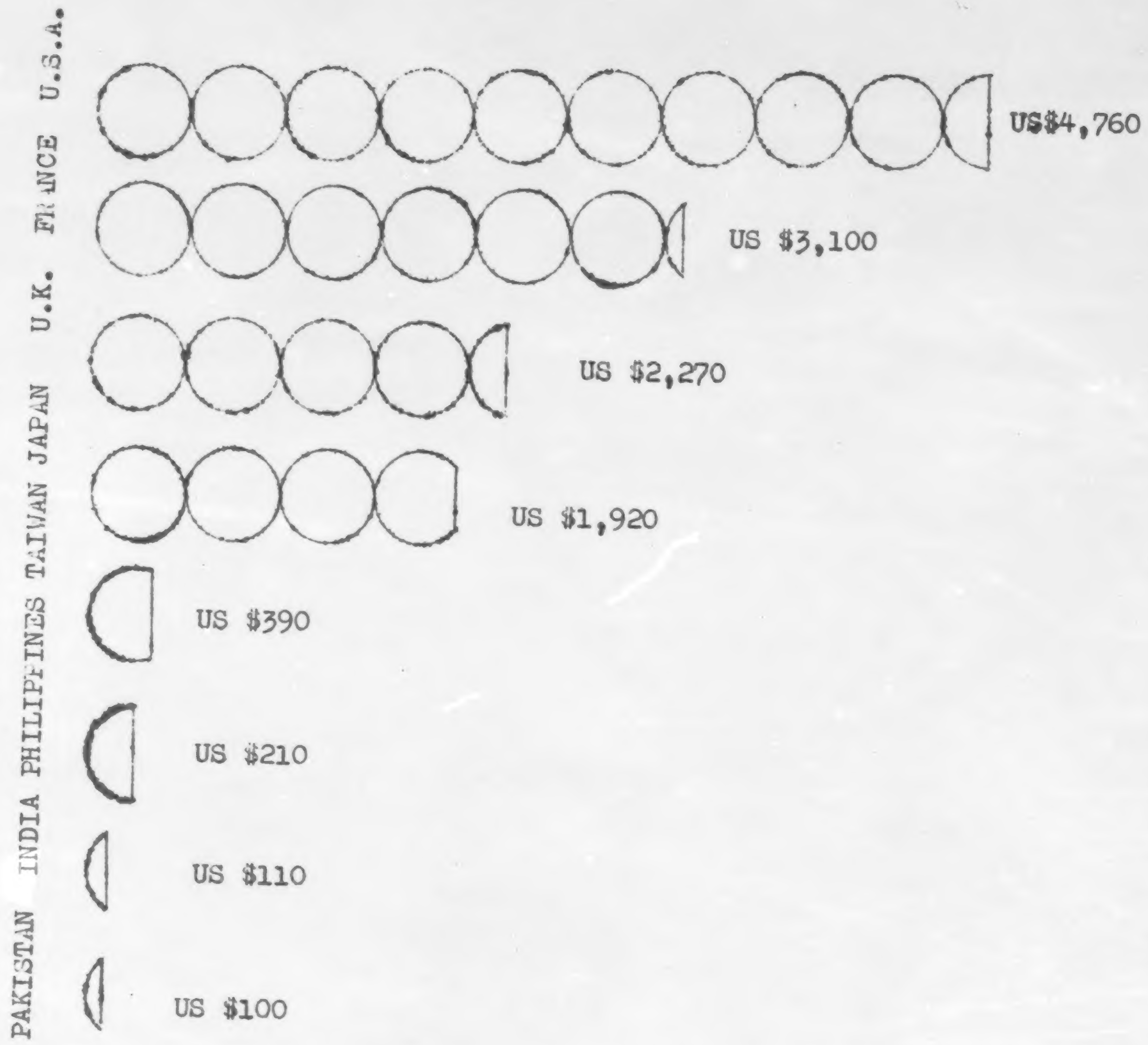
Besides creating new jobs for young people -

> Additional non-agricultural jobs will have to be provided for farmers who will continue to leave depressed rural areas and to migrate to the cities.
>
> More adequate jobs will have to be provided for those either underemployed or working part-time.
>
> Different jobs will have to be provided for people working in professions bound to become obsolete.

SOURCE: U.P. Population Institute, Philippine Population Profiles, Prospects, Problems (Manila: Population Institute, 1970), p. 71.

APPENDIX F

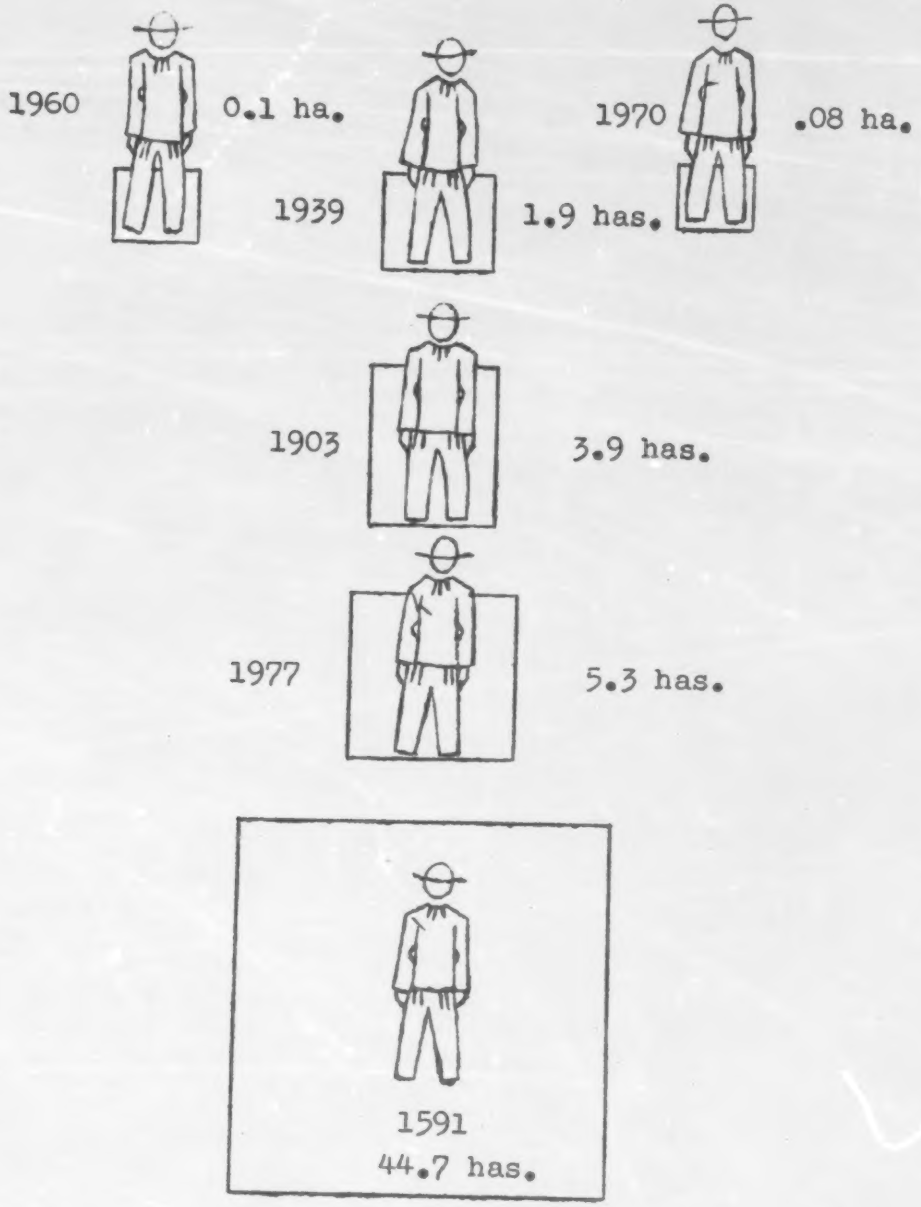
PER CAPITA GROSS NATIONAL PRODUCT, 1973



SOURCE: U.P. Population Institute, Philippine Population - Profiles, Problems, Prospects (Manila: Population Institute, U.P. Systems, 1974), p. 48.

APPENDIX G

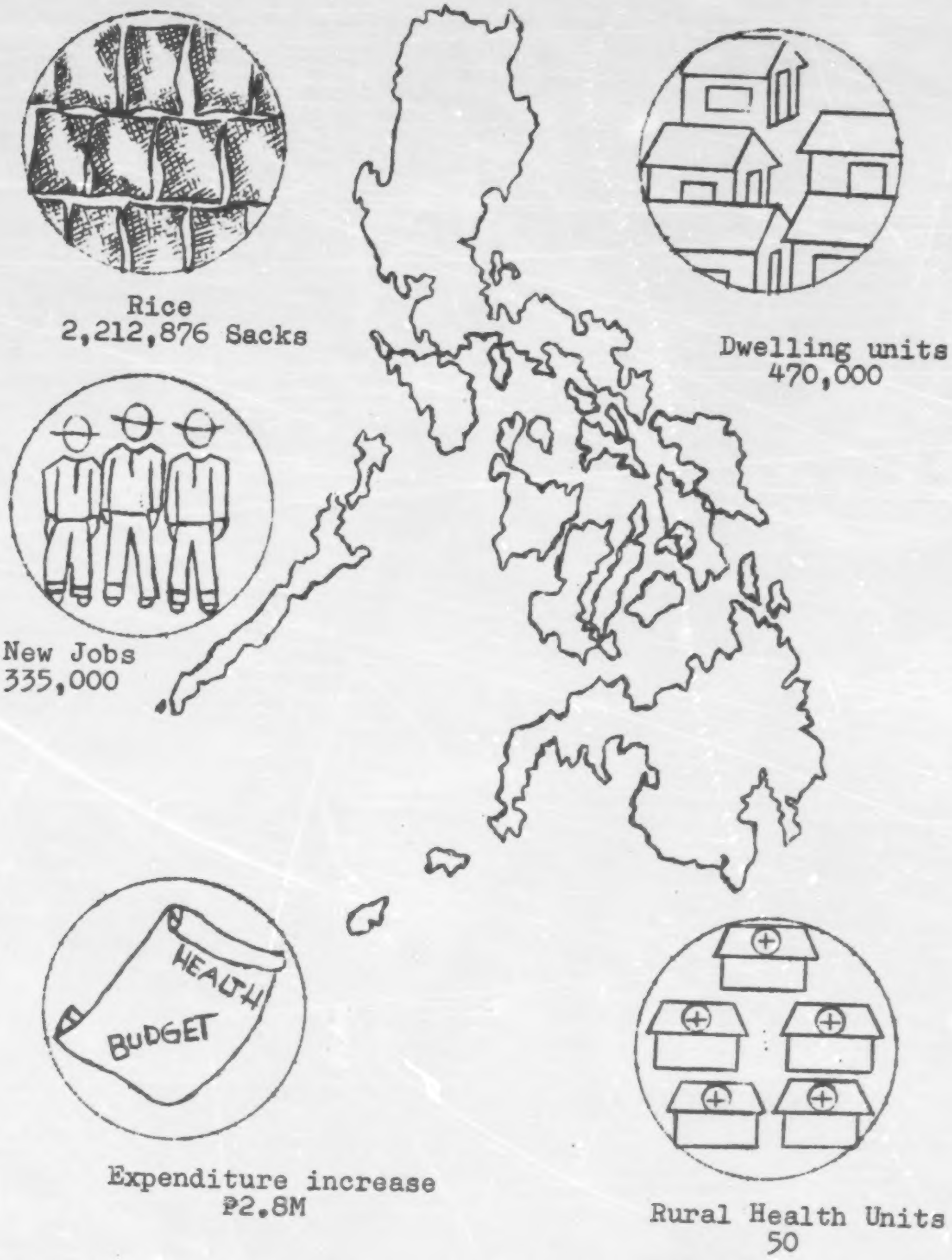
HECTARES OF LAND PER PERSON, PHILIPPINES 1591-1970



SOURCE: U.P. Population Institute, Philippine Population - Profiles, Prospects, Problems (Manila: Population Institute, 1970), p. 44.

APPENDIX H

ADDITIONAL ANNUAL RESOURCES REQUIRED
To Maintain Present Living Standards


Rice
2,212,876 Sacks
Dwelling units
470,000
New Jobs
335,000
HEALTH
BUDGET
Expenditure increase
₱2.8M
Rural Health Units
50

SOURCE: U.P. Population Insitute, Philippine Population - Profiles, Prospects, Problems (Manila: Population Institute, 1970),p. 78.

APPENDIX I

Population and Production: Twin Problems*

Love-making is Cheap

The problem of population explosion in the Philippines has become real because gradually, for the past 10 to 15 years, we have allowed consumption to outdistance production.

The Philippines has in fact one of the highest rates (3.1 percent) of population increase in the world. Babies are mass produced in the Philippines: 3 Filipino babies are born every minute, 191 every hour, 4,503 a day, 32,240 every week, 139,707 every month and in one year (1970), 1,676,481.

It is apparent that Filipinos live their sex lives vigorously. Besides, love-making is cheap while contraceptives are a bit expensive or not always available. Also, some Filipinos are inhibited by religious taboos. The natural rhythm method is not very successful.

Another contributing factor to the population explosion in the Philippines is that electricity has not reached many of our barrios where there is very little etertainment. In such a case, what else is there that our rural couples can sensibly do in the dark.

In the urban areas, one TV distributor has launched an advertising campaign urging people to buy their sets to help arrest population explosion.

Thanks to the Filipino's vigorous love-making, the country's population was counted in May, 1970 and reported to be at 36,684,486. This makes the Philippines, population-wise, the sixth largest nation in Asia and the fifteenth largest in the world. (Sixteenth now as the result of the division of Pakistan into two countries - Pakistan and Bangladesh.)

A Young Population

The birth rate in the Philippines was 3.1 for the fifties and 3.0 for the sixties. The ratio of birth rate to death rate in the country is 3 to 1.

---

*Article by Rodolfo G. Tupas, published in the Sunday Times Magazine, May 28, 1972.

A high birth rate with a reduced death rate has given the Philippines a young population. In 1969, the median age in this country was 16.6 years. The median age in Sweden was 35.0 while in the U.S. it was 27.2 years.

The Philippine population is getting younger every year. It is predicted that if fertility were to remain unchanged and mortality were to decline moderately in the next 30 years, half of the Philippine population in 1980 would be younger than 16.1 years. The end of the century, the median age would be 15.8 years. We would become a nation of teen-agers.

If, however, fertility should decline so as to reduce family sizes by one third, the median age would climb over 7 years or from 16.7 years in 1960 to 24 years by 2000.

Whether young or not, a number of sociologists are alarmed over the prospects of an unlimited population growth.

Mercedes Concepcion of the Population Institute, University of the Philippines, pointed out:

> "... the rate of natural increase (births minus deaths) expressed in percentage terms (3.4 per cent) is impressive. A rate of increase of 3.4 per cent represents an increase of 1.2 million Filipinos each year. This annual addition has a very important implication as population size increases, if the rate remains the same, the amount of annual increments to the population will become larger and larger. The yearly increases ultimately become so large that numbers which look impossibly high are obtained. For example if the present Philippine population of more than 39 million continues to grow at its current rate for only one hundred years, the total population would exceed one billion persons in 2072. This is equivalent to about three tenths of the world's present inhabitants, and would be roughly equal to moving all of the population of Africa, North America, Latin America and the U.S.S.R. into the 7,000 islands composing the Republic of the Philippines.

"What does this mean for the Philippines? It means that the country has all the ingredients of a very serious problem, one which could reach very critical proportions in the decade of the seventies. Should present rates continue, the children born immediately after World War II who live to retire at 65, will be residing in a nation three and half times as populous as at present. Thus, the impact of a runaway population growth could blight the lives of the children and grandchildren already born or to be born from now on."

Labor Force and Production

With our present birth rate, our labor force is absorbing an average of nearly 1,300 new workers each day. In the next five years, this daily number might be increased to 1,500.

Our figures on unemployment and underemployment are not easily discernible but it is easy to imagine how the ranks of the unemployed and underemployed will increase significantly if not enough job opportunities are created to accommodate the increase.

There is a shortage of skilled and semi-skilled workers in some areas of the economy but there is certainly an oversupply of unskilled workers.

Our rate of production for the past four to five years has averaged at 6 percent. The imposition of the floating rate threw the economy out of kilter and consequently brought our rate of growth down.

While it is true that we now are faced with the tricky problem of creeping inflation, still, the basic reason why prices continue to soar is that we are still suffering from underproduction.

The country today is urgently in need of more food, more clothing, more and cheaper medicine, and more housing.

Our present population of over 39 million, it has been pointed out, requires some 6.6 million dwelling units. The Presidential Assistant for Housing has estimated that for 1960-1980, housing requirements would be about 12 new dwellings per thousand population. The reported present rate of construction of only two to three per thousand population still underlines the need for more substantial and accelerated housing program.

The increasing need for social housing reflects our burgeoning population growth in the past ten to fifteen years. Now, too, we are talking about elevated highways or skyways in the urban areas because of the rapid increase in vehicular traffic. Congestion in cities has also brought about problems of health and sanitation, peace and order, drainage and sewerage, and a continued supply of water. The need for more infrastructure, more roads, harbors, airports, bridges, irrigation systems continues because of our unchecked population increase. It has become apparent that our rate of production has to catch up with our rate of population increase,

A Stumbling Block

It is obvious that one stumbling block to a quickened pace of development is the problem of an unlimited population. It is for this reason that many economists argue for family planning. There seems little doubt that if a country practices family planning, or the limiting of children to the number a couple can afford, the pace of development will quicken.

When people have more children than they can afford, they become impoverished. And the more children they add, the more abject their poverty. Abject poverty is dehumanizing.

Family planning is worthy of exhortation but unfortunately it is far easier to recommend than to implement. Sometimes, especially among the poor, there are cultural difficulties. To some men, children are a symbol of manliness. If a man is poor and lacking in status symbols, what greater symbol is there than one dozen children?

It should be remembered that in impoverished rural areas, children help in farm chores. This is especially true in the case of farmers who have to rely on the carabao rather than the tractor.

There is a special added difficulty in the Philippines which is predominantly Catholic. The incumbent Pope has failed to openly approve of the use of the birth control pill.

Limiting a country's population cannot be done overnight. In fact this task is one of the most difficult social changes to institute. It is not, on the other hand, impossible to implement.

In the final analysis, the hope for a cure of overpopulation lies in this country's process of industrialization. This includes the proper development of agriculture or the industrialization of agriculture.

Robert Heilbroner in his book "The Great Ascent" pointed out that "if we are to judge by the experience of the past, industrialization brings its own subtle forces to bear on the birth rate. The altered status of women, the economic disadvantages of children in an industrialized environment, the delayed age of marriage, and, not least, the expanded horizon of expectations, all except pressue which seem to depress the natural birth rate."

Scientific and technological innovations in the industrial process do provide the hope for densely populated countries which seek escape from the Malthusian trap. Along with this, an all-out campaign for family planning would help in stemming the tide of an overwhelming population. It is not quantity but quality that is the underlying principle in the twin problems of population and production.

APPENDIX J

Contrary Views on People*

With such a prospect of a world choking itself to death because of overpopulation, family planning, as an alternative, gains adherents.

Working on the universal fear of death, the most feared of all our fears, proponents of family planning have visualized a not too far-off world of billions and billions of people literally clawing at each other, gasping for air, fighting for water, elbowing each other for space, killing for food. Not even the direct imaginings of Dante in his Inferno can compare with this highly unattractive picture because, family planners point out, this could happen and would happen if people will not control, if not temporarily, put a total stop to the production of babies. Although couched in other terms, the key word here is production, it gives away the single biggest factor that affects birth control. A most natural function of man-procreation is unwittingly equated with economics. What used to be purely a private, natural function, has become an economic function. So that every time a couple takes the sex act with the likely result of a baby coming in nine months, they must, family planners insist, consider the wider consequences of rearing the baby from the time it leaves the womb to the time it grows and goes to school and seeks and, hopefully, find a job, and so on.

Working on the Filipino people, proponents of the family planning movement point an accusing finger at their poverty as proof that they have been having too many babies. Whatever progress they make, the argument continues, is negated by a high growth rate of the population that eats away any and all the country's surplus of production and worse, competing with the resources that, as it is, are already in short supply.

"This is a favorite line of the World Bank", says Emmanuel Q. Yap, secretary-general of the Asian Development Center and formerly head senior member of the Congressional Economic Planning Office. "Its president, Rober MacNamara, has been telling us Asian nations that we are poor and will always be poor and will become even poorer because our population continues to grow at too fast a rate."

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*Article by Ernesto M. Macatuno, published in the Sunday Times Magazine, May 28, 1972.

In other words, Yap is against family planning as a state policy.

"I find it obnoxious, this interference of the state on the individual's sacred right," Yap says.

"While those who advocate family planning say that they work on persuasion, and that nobody is forced to submit to the methods of birth control they teach, I say that there is a very thin line dividing persuasion and compulsion."

Indeed, if family planning succeeds in becoming generally accepted in the Philippines, "large families" surely will become a dirty phase. Large families - or large, poor families, it must be qualified - will suffer from some kind of a stigma if frowned upon by society. And this is an aim of the family planning movement.

"The argument used by people like MacNamara that Asia is poor because it has too many people is not true, except for some historical situations like that found in China," says Yap. "If a country, without foreign exploitation, with its people working together relentlessly, using to the fullest its resources, remains poor and is getting even poorer, then perhaps, it must practice some form of birth control. This situation may also exist in India. But does it apply to other countries in Asia, to the Philippines in particular?

"The Philippines has enough natural resources and the technological know-how and the intelligent people to support a population twice and even thrice the present one. At 37 million I consider the Philippines still underpopulated.

National Economy

"It is true that the great masses of the Filipino people are poor, very poor, But this is not because there are too many of them and that there are too few resources, but that the resources and the technological know-how are used for and are controlled by only a few Filipinos and foreigners.

"In other words, the majority of Filipinos are being robbed of their right to use and enjoy and live by the country's resources and technological know-how. And here come these proponents of family planning now telling them that it is because they produce too many babies! These poor families can support more children if only they are not deprived of the use and enjoyment of the country's resources.

"We are told that the country's economy cannot support more people and that therefore, as a solution, we must curb the growth rate of our population, "I say that the economy must be adjusted to the people, not the people to the economy. What we need to do is not curb our population growth, but rationalize our economy, meaning that we must develop an economy that is for, of and by the people. What do we have at present? A maldistribution of wealth and an irrational use of our resources and industries. What we have is an economy controlled and owned by only a few Filipinos and vested foreign interests."

"If the administration has developed an ability to effectively exercise the imperatives of Filipino political economics we would not have to succumb to ridiculous impositions and economic policies such as the admonition of Western powers that we must gear our population to our rate of economic growth.

Enrichment, Not Restriction, of Life

Holding a different view is Senate President Gil Puyat. He says that, on the contrary, "the objective of family planning is the enrichment, and not restriction, of life. With less children, poor families have a better chance of staking a bright future.

"Economic progress should be equated with the happiness of the people. Such is not what's happening now because of the 3.1 growth rate of our population. That means something like one million people added to our population every year.

"The economy is not strong enough, is not big enough to provide the needs of this yearly increase of our population. As it is, even without this one million more people the country can hardly meet the needs of the population. Can you imagine the services that will be needed for them? How many schools, homes, hospitals, irrigation systems, jobs will have to be provided every year for these people? The country and the government do not have such resources now.

"With 37 million people the Philippines is already overpopulated. By 1980 we will have, if the present growth rates continue, about 54 million, that would make us the fifth largest nation in the world.

"By then what shall we do with the additional 17 million people? That would be a tremendous burden to the country. By 1980 with a population of 54 million, we must generate something like 16,800,000 new jobs. How can we provide these? I fear that the economy cannot absorb these additions to our population."

An answer to this, in Senator Puyat's mind is: Control population growth, practice family planning.

This, however, works on the assumption that the 17 million added to the population will be purely and simply an "economic burden." Can they not also be productive units?

As Yap says, by rationalizing our economy we can support a population twice or thrice our present one. Japan, a much poorer country in point of natural resources and size of arable lands, right now, with over 100 million people, is facing a labor shortage! Japanese industry is frantically searching for more hands to work on its factories. How did this happen in Japan? A decade ago they instituted family planning because they too, at this time, were afraid of a population explosion. The answer they found out is science and technology and a rational use of their economy and resources.

It will be difficult for the Philippines to duplicate the feat of the Japanese in industrializing their country. The Japanese have a strong pride in their country, they are disciplined, they love to work. All of these are lacking in the Filipino. But, as the Jesuit argument goes, what is impossible one way may be possible in another way. "We have,", Yap says in effect, "what it takes."

A small population for the Philippines is no guarantee that it will move ahead at a faster rate, that there will be an equitable distribution of wealth or means to acquire wealth with more resources to be divided among a less number of people. We cannot honestly say, for example, that the Philippines was economically and socially better off at the turn of the century, when our population was not even one-third of the present one. The comforts and conveniences around us that we now take for granted were non-existent then. In short, science and technology have improved the quality of life of the Filipinos, and will improve it further with the rationalization of our economy. Also, at the time, the Philippines was under Spain and being slaves in their own country did not enjoy the fruits of their labor, the benefits to be had from the country's natural resources. Things improved somewhat when the Philippines fell under American domination. But this prosperity was illusory; the Philippines being at the time a colony, a satellite, an extension of the then economic fairyland that was the United States, was recipient of the blessings of economic progress.

But now that we are an independent country, we'll have to stand on our own feet. We cannot continue to rely on US help in the same manner that we should stop allowing those impositions of the United States on our economy.

Motives

The motives of this family planning movement or planned parenthood also are open to question. The target here is the poor Filipino family. The size of the poor Filipino family is being limited principally because it is poor. In other words, the family planning movement is discriminatory. It treats the poor Filipino families as inferior and undeserving to have many children.

Anyway, efforts of the proponents of family planning are thwarted by these poor Filipino families because they reason out that "their only wealth is their children." On this optimistic note, they foresee a future bright for them. Indeed every individual, save for the idiot and the lazy, has a tremendous potential for personal advancement. Every individual, born poor or rich, can contribute to the nation's growth. It is only a question of providing the opportunities and this can be done by having an economy that is, as pointed out by Yap, for, of and by the Filipino people.

The family planning movement in the Philippines is only a part of the world-wide movement of white, Western nations led by the United States. Observors point out that the U.S has initiated this move not out of fear of a world that in the future will choke itself to death because of overpopulation, but because of the grim view of the peoples of the Asian continent spilling over to their countries. It is the same old bogey of the Yellow Peril. Only this time, the brown and the black people have been added to their problem.

For the Philippines' population problem, production, more production is the answer along with the rationalization of the country's economy and the use of the resources. On this point Yap and Senator Puyat are in agreement.

If this is done, and with more people, the Philippines will become indeed a powerful nation.

Family planning per se, as Yap adds, is not all bad. It is the motive behind this movement that he questions. He would rather that the number of children from each family be left as a matter of choice of husband and wife and not of a state policy. For uncontrolled family planning may, let us hope, not see euthanasia working in reverse. While euthanasia is mercy killing of the old, infirm and useless, in other words, of people who are already living, family planning is the deprivation of a potential human being of the right to exist, In the eagerness of family planning proponents this may happen as what is described by Aldous Huxley in his novel Brave New World where babies are born not in the womb but in test-tube laboratories. That is really controlled birth. I suppose not even the rich people, who for reasons of economic wealth consider themselves exempt from the restirctions imposed by family planning, would like this aberration.

APPENDIX K

POPULATION AND NATIONAL DEVELOPMENT*

by

President Ferdinand E. Marcos
Republic of the Philippines

I am grateful for this opportunity to address this 8th Biennial Conference of the UNESCO National Commission of the Philippines, particularly at this time when the Conference is focused on the "Population Problems in the Second Development Decade."

For I would like to believe that I come here today not as a ceremonial speaker but as a delegate like each and everyone of you, anxious to participate in an inquiry and discussion on a subject that we share as a common concern.

A World-Wide Concern

It is not by accident that the United Nations should have spoken of population as a problem facing "the Second Development Decade" for it is a subject ever-present in the consciousness of statesmen and leaders all over the world today.

There is perhaps no nation in the world today, that is untroubled by this nascent challenge, and the fact that you have invited here delegates from all over the country - representing the academic, the government, the civic organizations of the UNESCO National Commission to address themselves to the population problem is a reflection of our nation's stake in this challenge.

But let us note here at once that if this problem is world-wide, the degree in which nations are pressured by it, the magnitude of the problem as faced by particular nations, vary widely. There is no single solution to the problem posed by population growth for the whole of humanity; there is only a specific answer to the specific problem faced by every nation. No doubt there will be a great deal that nations can learn from one another by way of technique in meeting the problem; but let us admit at once that there is a difference of perspective between the way the United Nations would view, for instance, the world-wide population problem, and the way we would view our problem in the context of our conditions and needs.

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*Speech delivered at 8th Biennial Conference, UNESCO National Commission of the Philippines, Philamlife Auditorium, September 6-8, 1973.

A Difference of Perspective

This is not a case of one perspective being wrong and another correct; they are simply different. It is important that we recognized this at once, because it seems to me that population growth is one problem in which it is easy for nations to get lost in the problems of others and of all humanity, and to lose thereby a firm grip and understanding of the precise challenges that they face.

Let me illustrate this point. The statistical data regarding population growth of the world today provide a grim picture of the future of humanity, unless drastic measures are taken to curb the birth rate, not at a future time but now. The forecasts of demographers and technologists indicate that it will be difficult to house and feed the population of the world by the close of the present century, unless some serious effort is made to control the world's population. This is a fact that is incontrovertible.

But what is true of the whole world taken as a collective entity, is not true, in the same precise and grim form, for every individual country and every national community. For the problem as faced by individual nations varies indeterminately. Here in our country, whatever may be said about our high population growth rate, the prospects do not reduce us to a future that is grim and unmanageable as those of nations in which today the experience of congestion and suffocation are already evident.

A Firm Grip on the Problem

In saying this, let me be very clear, I do not diminish in any way the problem that we face. It is there and it must be faced. I merely wish to emphasize that we should recognize the precise outlines of our population problem, and on the basis of a firm understanding of the problem, formulate the necessary policy and program of solving it.

This is an approach that is new to our experience as a nation, in fact, to most of the nations of the third world, whose way of looking at themselves and their conditions has been invariably conditioned by the experience of the advanced countries. In the multiple challenges that face these countries - the challenge of national development, the question of culture, the challenge of political stability, the pursuit of modernization - it is traditional for these countries to see these problems that they live with in the context of the western advanced nations, and in the process, as Gunnar

Myrdal has pointed out in Asian Drama, they wind up in a kind of equilibrium of stagnation.

A New Consciousness

I cannot say it often enough that the most important change that has happened in our country since the proclamation of martial law has been the arrival of a new consciousness, a new awareness, of our conditions, our necessities, and our capacities for self-deliverance. This is the consciousness that has allowed us to cope with the challenge to the political stability of our nation, to the downward spiral of the economy, to the decay of institutions and values in our society. It has taken years to arrive at this new awareness of ourselves, but now that it has come and has been found to be fructifying and liberating force, we must hold on to it firmly and allow it to take root in our very life as a nation.

Such must be our approach to the population problem that we now face.

What are the facts?

First, the last census taken in 1970 place our population birth rate at 3.01 percent, one of the highest in the world. Assuming no decline in this growth rate, our present population will double, according to demographers, in 23 years. And by the year 2000, 89 million Filipinos will inhabit this land.

This is the statistical testimony of the population growth rate, and seen in isolation from other factors, I can understand why so many take a grim view of it. But let us consider another ang'e. Our population in terms of the total land area of our country is remarkably low, compared to the populations of other countries, particularly Japan and the industrialized countries, Indeed in a recent book on Asia, a social scientist has said, that our archipelago has nothing to fear from even the prospect of a quadrupled population, provided that its vast natural resources are finally exploited and made industrially productive.

The insight that we gain from these two angles of the problem is that we suffer from a population problem in relation to our capacity to achieve modernization and industrialization. A government that assumes the perpetual imprisonment of the economy in underdevelopment has reason indeed to fear the population problem. A leadership on the other hand that has full confidence in the national capacity for modernization now, only has to contain the problem in such a way that the birth rate will not set back the period of take-off or upset the strategy of capital formation for development.

The Present Population Policy

This is the context by which the population policy and program of the government should be understood. It is a policy that has arisen not from the kind of crisis-thinking that tell us, control population now or perish, so evident in the attitudes of those who worry about population. Rather it is a policy that recognizes the complementaries of economic development planning and population planning in a society that is developing towards modernization.

For this reason our population policy is non-coercive. We are, indeed, concerned that our population growth rate is high and poses possible problems to our transition into modernity, but the proportions of the problem do not demand that we institute drastic controls.

In this respect, it should be emphasized here that our population program consists of two related programs: control by family planning on the one hand, dispersal of population from heavily-congested communities to sparsely-populated areas on the other.

What is emphasized in the first program is a sensible educational and communications approach, designed to encourage Filipino families, particularly the masses, to plan smaller families with which their resources can cope.

It was President Lincolm who once said that "God must love the poor, for otherwise he would not make so many of them." In the modern world, however, we have, I think, recognized the inadequacy of this love to cope with the needs of the poor for food, clothing, and shelter. It would seem to be a reiteration of the teaching of Holy Scriptures that "God helps those who help themselves."

This is the principal activity of the Population Commission, which has to date established over 2,000 family planning clinics all over the country. The whole spectrum of the information program does not seek to uproot families from religious beliefs and cultural practices it seeks rather to motivate them into a sensible approach to the planning of their families. Such a program requires an intensive effort to educate and modify custom, to sell in a sense the way of the modern to the broad masses of our people.

Population-Dispersal

At the other side of the spectrum, the government pursues a program to de-congest our cities and heavily-populated areas and locate improvident families in places where they have a better chance at a decent and productive life. This goes hand in hand with our efforts to disperse industries and to provide manpower for new industries all over the country. For it does not take considerable research to realize that our urban areas, particularly the Greater Manila area, suffers from increasing congestion that saps life from the metropolitan community, while in the provinces, there is not only room, but there is beginning to emerge a need for manpower to man new industries and agricultural farms.

This is an insight into the problem that has often been missed in the din of concern over the "world's exploding-million", "the country's high birth rate", and "the numbers of the unemployed."

Total Approach

The important thing to consider in approaching the population problem in our country, is that it requires a total approach that should take into account all factors relevant to it, and should locate it firmly in the context of our massive push towards development. For the population problem is never an isolated, or separable, problem. It is part of this larger approach that the United Nations for instance should consider in the light of what it calls the *development decade*.

This then is what I take to be the historical context of our conference. The tendency is to think of the problem in strictly statistical terms, and statistics like computers often do not wear a recognizeable and human face. Let us understand the populatiom problem for what it is in our country, and let us face the real pressure that it poses before us.

Thank you and good day.

APPENDIX L

"Protection of the Environment

Those who demand that we clean our dirty air and dirty water completely and beautify our ugly landscape thoroughly just the way it was before factories appeared in the horizons simply fail to grasp the enormous dimensions of the waste problem. Waste alternative is environmental control.

On the other hand, those who think we must push ahead even at the cost of poisoning, choking and pushing around people and animals, should be humane enough to realize that we must, while we still have considerable time, correct our lethal course.

It has been said that if pollution is the brother of afluence, concern about pollution is affluence's child.

No Room for Horse Operas

Environmental control is more complicated than most people imagine. There is, of course, the tendency to dramarize the danger of pollution in the form of movie horse operas. It is not really a case between the "polluters" and the "good guys in white hats." All men are polluters. The motorists foul the air with automotive exhaust fumes, agriculturists using insecticides and fertilizers ravage the rivers. Big industries are implicated in the depredations of the environment.

The abuse of the natural resources of air, water, and land occurs in a capitalistic or communistic system. But while there is no sense panicking, we must not forget to honor the terms of partnership in which we coexist with other forms of life and we must always learn to cope properly with our environment. A deteriorating environment - dirty air, dirty water, unbeatable noise, dreary landscape - is a long range threat to our prosperity, health and the continuation of our race. We must take the threat seriously and do something practical about it rather than execute a retreat from technology, which might bring greater casualties.

The growth of our cities and industries has changed the character of our environment and the effects might be telling on the populace. Our cities are not yet equipped to handle this change. A research project carried out by John Calhoun at Bethsada, Maryland in America is frequently mentioned in environmentalist circles. Calhoun placed rats

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[*] Article by Rodolfo G. Tupas, published in the Sunday Times Magazine, August 29, 1971.

in a closed area ample for the original population. As they multiplied, the crowded animals, though well fed, developed most distressing psychoses. There is a close parallel between this experiment and our cities. But if these lowly rats were made to smell foul air and live inside a dirty environment, they might go crazier quicker than in the first project.

Pollution and Combustion

By-products of combustion account for a large percentage (roughly 85 percent) of the total tonnage burden of air pollutions in Greater Manila and possibly such industrial cities as Iligan.

Environmental engineers explain that most of the emission commonly classified as pollutants are not inherent in combustion, but are rather the results of inefficient burning or impure fuels.

Pollutants are of two types, gases and particles.

Gases which are less visible but more damaging, include sulphur dioxide (SO_2) a product of combustion of coal or oil that contains sulphur; carbon monoxide (CO), emitted when insufficient oxygen is present during combustion and various oxides of nitrogen, products of very high combustion temperature. A good deal of complex hydrocarbon compounds both particulates and gases, also result from incomplete combustion.

The particles include fly ash, which is an unburnable mineral fraction of ordinary coal, and soot, which is burnable but unburned carbon.

Combustion from motor vehicles, according to Reynaldo M. Lesaca, commissioner of the National Water and Air Pollution Control Commission, produces carbon monoxide (CO), hydrocarbon (HO) oxides of sulphur (SO) oxides of nitrogen (NO), and particulates (particles). Lesaca estimates that motor vehicles in Greater Manila contribute as much as 60 to 70 percent of the air pollution in this area. One can probably add that motor vehicles in metropolitan Manila contribute 75 percent of the noise.

When a bus belches black smoke, it is emitting particulates and that means, Eligio Tavanlar, president of the Society for Better Environment, explained, that CO, HO, SO, and NO pollutants are all present.

Some industrial chimneys, on the other hand, emit sulphur dioxide. Air-pollution disasters occur when atmospheric temperature inversions combine with low wind ventilation to trap coal smoke over populated areas. Much of industry uses coal as a source of energy. Many studies have suggested that sulphur oxide (SO_2) has been a cause of intensifying agent in various respiratory ailments even without inversion situations. It has been pointed out also that SO_2 combines with oxygen and then with moisture to form sulphuric acid.

If you find that your shirt collar or your desk in your office is soiled, the main cause is probably the potpourri of airborne particulate. Sulphur dioxide accounts for most of the damage to materials and much of that to agriculture. The atmosphere in many industrialized areas is more corrosive to metals and other materials than sea air.

Rivers Demand Oxygen

Rivers and lakes have the ability to purify themselves; sunlight bleaches out some pollutants, others settle to the bottom and stay there, while still others are consumed by beneficial bacteria. But these bacteria need oxygen which is vital to the river's or lake's self-purification. Oxygen that sustains bacteria as well as fish and other organisms is replenished from the atmosphere and from life processes of aquatic plants.

The trouble begins when the demand for dissolved oxygen exceeds the available supply. What happens is that big quantities of organic pollutants such as sewage alter balance.

Bacteria feeding upon the pollutants multiply and consume the oxygen, organic debris accumulates, aerobic areas develop, where micro-organisms that can live and grow without free oxygen decompose the settled solids, producing foul odors, and species of fish sensitive to oxygen deficiency can no longer survive.

When a river is polluted, the dead algae, which once rampantly fed upon the fertilizer drained into rivers, consumes so much of the available oxygen as to destroy the bacterial action that once cleansed the rivers of organic wastes.

Environmental engineers have also pointed out that the temperature of rivers must not go beyond anywhere from 83 to 90 degrees Farenheit because very warm water absorbs less oxygen and this slows down decomposition of organic matter and kills fish. Power plants disgorging great masses of hot water are capable of raising the stream temperature by ten or twenty degrees in the immediate vicinity of the plant.

Phosphates is one water-pollutant which comes in large amounts from detergents and fertilizers and from human wastes.

Restoring the Balance

The problem of environmental control will always be with us since there is no sense turning back the clock to pre-industrial days. However, the struggle to restore the balance between man and his nature will succeed only if we come up with pragmatic and workable solutions.

Some industrialists still argue that pollution is the price of progress. This may be true but if the price is sending too many people to the hospital or cemetery, the price may be too high.

Eligio Tavanlar, president of the Society for Better Environment, rightly pointed out that "we must not only consider the Gross National Product but the Gross National Pollution. In other words, the ultimate measure is not the Gross National Product but the National Well-Being or the final benefits that go to the national economy. We can have a better society if we allow pollution only to tolerate limits and we must always consider the national well-being.

In fact, benefit-cost analysis is winning its cold-eyed case in progressive industrial circles. Although waste and pollution problems are too big to be eliminated, they can certainly be ameliorated by recycling more of what has been produced, or by changing the wastes or the manner of their disposal. Pollution is at optional level when the cost of additional amelioration exceeds the benefits. If, for example, by spending a peso, an upstream factory can save downstream users at least a peso, it should do so. This represents benefit-cost analysis.

Cleaning up our environment is far from an easy task. But the threat of pollution to health and life itself is real. The Philippines has ample time in its hands to bring about cleaner air and cleaner water. It should use this time wisely.

APPENDIX M

"SOME MYTHS IN FAMILY PLANNING"*

A well-known economist admits that to a certain extent, "the question of the family - how many children to bring up, within what space of time, etc. - is something that should be left to the decision of the parents as heads." But there is another responsibility to the country, dramatic though that may sound.

A few months ago, I read an article in a magazine about a Britisher who predicted that a few years from now, governments all over the world will limit - forcibly limit, mind you - all couples to two children. No families of five, four even three offsprings. I suppose punishments would have been dealt out to those who disobeyed the rules.

He admits that this theory seems far-fetched even now, with the worsening population, but it served to prove his point. "What I'm trying to say is, it's the responsibility of every parent to prevent this dire prophecy from coming true. There shouldn't be any political pressure bearing down on you to tell you what to do. You must enter into family planning as a responsible parent and citizen, because you must help your country, to fully develop its national and economic resources to make it a better world for your children."

Rich and Poor

And a basic misconception of the people, according to Dr. Jean Mayer, professor of nutrition at Harvard, is that family planning and population control are only for the poor. "People think," says Dr. Mayer, "that the rich don't need to plan their families - after all they're rich enough, they can afford as many children as they can have and none of them will go hungry. But this is a very grave mistake."

According to Dr. Mayer, "Rich people occupy space, consume more of each natural resource, disturb the ecology more, and create more land, air, water, chemical, terminal, and radioactive pollution than poor people."

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*Excerpt taken from the article "Some Myths in Family Planning" by Margot P. Flores from the Filipino Viewpoints on Family Planning.

APPENDIX N

"I Didn't Plan My Family, It Just Happened"*

The national population problem and the population problems of individual families are distinct, although related problems. One lies within the field of public policy and government action; the other is in the realm of the private and the personal, involving conscience and the rights of individual human beings.

The danger in getting them mixed up is that the government, in its eagerness to solve its population problem, might over-step its bounds and start invading even the family bedroom, dictating what should be done there and how. This is the danger the Philippine Catholic Bishops warned against in their recent statement on the problem of population growth, although they didn't say so in those words.

This is not to minimize the national (in fact it is a global) problem or its effects on individual families. When a population grows faster than the economy, individual families are affected: shortage of food, housing, school and medical facilities and spreading poverty are only some of the effects of the imbalance.

But this is a problem on a different scale; that of individual families. Individual families can have their own "little population" problem with or without the national population problem. And for some few relatively fortunate families, the national population problems pose no problem at all.

These problems cannot all be lumped into one, and it is important - if government is to remain a servant and not a master to keep the distinction in mind.

Crash program for economic development, cutting down on extravagance and waste, better planning of project, control of migration, even efforts to raise the minimum age of marriage, and integrated program of sex education - these are some of the measures within the sphere of the government.

But the decision of how many children a family should have, precisely how a couple limit the size of their family if they have serious **reasons** for doing so - these are decisions that belong to the couple as responsible parents, although the Church and the government should assist them in coming to the right decision.

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*Excerpt taken from the article "I Didn't Plan My Family, It Just Happened" by Pedro de Vega, from the Filipino Viewpoints on Family Planning.

APPENDIX O

Some Muslim Beliefs Favoring Large Families

The following quotations were expressed by Director Nunggo Pahm of Region XII at the Curriculum Development Workshop in Population Education for Muslim Filipinos. Secondary Level, in the summer of 1978. These quotations were based on the Quran or Hadith of the Prophet Mohammad.

1. Marry the woman who will love her husband and who will give you many children, because I want you to be greater and numerous than other people.
2. All boys, upon reaching puberty, are to marry to avoid promiscuity.
3. When a Muslim marries, he fulfills a part of his religion; likewise, he must observe all its teachings in order to attain a part of it.
4. When a man asks for your daughter's hand in marriage, rejoice at his decision and belief, and give your daughter to him.
5. Marry and procreate.
6. You were given a spouse in order to multiply.
7. Marriage has two purposes: to elevate morality and to increase the population.
8. The use of pills contravenes the increase of population.
9. Birth control is allowed only when the health of the mother requires it.
10. Do not kill your children out of fear of being poor. Like you, they will be provided for.

According to Dr. Abdulah Madale of the Mindanao State University:

1. The Maranao value their children highly. To them, children are God's gifts to a couple. Every child that is born has Allah's blessings.
2. To the Maranao, a group makes might and right. Because of this, there is a need for a small group to join a bigger group.

APPENDIX P

Views Gathered from Lectures and Articles Written by Known Writers

This Crowded World

The human population is growing rapidly - throughout the world and in the United States, too. It is true that there are still miles and miles of open countryside. You might wonder why most people who dislike crowded conditions don't move to these open spaces. But there are many reasons why this cannot be done easily. People must live near the jobs they are trained to do. They must live where there are schools for their children, where there are houses, where it is easy to get drinking water, where there are stores. You can add your own reasons why most people have to stay in or very near a crowded city.

Although the human population is growing fast, the round earth on which we all must live is fixed in size. It cannot grow larger. In fact, as more and more people crowd together on it, it seems to grow smaller all the time.

- Lilian B. Frankel, This Crowded World, p. 10

The Origins of the Population Explosion

Western civilization was transformed from a rural, agrarian society to an urban, industrial one. In the context of this industrial revolution, the present patterns of birth and death rates in the West were formed. And a population explosion in the rest of the world came from the sudden importation of Western technology into agrarian nations.

- Population Reference Bureau, Inc. The World Population Dilemma, p. 15.

People!

More than 3 billion people share the earth with you today. To picture what this huge number means, imagine that all the people in the world stood in one long single line. The line would reach 1¼ million miles! It could stretch to the moon and back, twice, or it could go around the earth 50 times at the equator.

Three and a half billion is an enormous number. Yet if people continue to increase as fast as they are right now, their number will double by the year 2000. Within your lifetime, there would then be about 7 billion people in the world. This rapid growth of mankind in the 20th century is called "the population explosion."

- Robert C. Cook and Hane Lacht,
People! An Introduction to the Study of Population, p. 7

Philippine Population Policy

Section 10, Article XV of the New Constitution states: "It shall be the responsibility of the State to achieve and maintain population levels most conducive to the national welfare."

Section 2 of the Revised Population Act of the Philippines (formerly R.A. 6365 otherwise known as the Population Act of 1971) states: "The Government of the Philippines hereby declares that for the purpose of furthering the national development, increasing the share of each Filipino in the fruits of economic progress and meeting the grave social and economic challenge of high rate of population growth, a national program of family planning involving both public and private sectors which respect the religious beliefs and values of the individual involved shall be undertaken."

A POPULATION EDUCATION UNIT IN SOCIAL STUDIES

Third Year - Population Changes

Conceptual Theme: : Development and Progress
Concept : Change
Generalization : The rate of population growth varies with advancement in civilization.
Suggested Time Allotment: 7-8 class periods

OVERVIEW

This unit provides additional content and materials to assist the teacher in evolving the generalization subsumed in the concept Change which is "The rate of population growth varies with advancement in civilization". At the same time, it reinforces and, probably synthesizes past learnings on the world and on Philippine demographic situations.

This unit should bring out clearly to the students that the population explosion which many countries of the world, particularly the less developed regions, are experiencing is the result primarily of the increasing gap between fertility and mortality which contributes to the increase in the rate of natural increase. Graphs and tables are used, to a large extent, in this unit to arrive at this demographic fact.

Students are aided with instructional materials which explain the demographic revolution in the less developed and in the developed regions of the world, compare and contrast the population changes in these regions, and analyze population trends. It will be noted that the art of skillful questioning is utilized to the maximum in order to assist students in interpreting the graphs and tables. Students are encouraged to express their views and to share their ideas with others in group work where they consider the factors that contribute to population explosion. They are also confronted with differences and at the same time ventilate their own personal views on the matter. Simple practice exercises on methods of measuring population increase are provided the students to make this lesson more meaningful and interesting to them.

As in any good teaching where student's background knowledge on the subject matter is first determined, it is suggested that a pre-test be given the students to provide baseline data on where the students are as far as knowledge on demography is concerned. It is likewise suggested that a post-test, using the same evaluation instrument, be given to appraise increments or gains in learning. This post-test may also aid the teacher in determining where re-teaching could be given. The suggested pre-test and post-test evaluation procedures do not preclude other means of measuring gains in knowledge, attitudes, and skills that the teacher may plan and carry out as she teaches the unit.

I. OBJECTIVES

A. General

Develop knowledge, understanding, and appreciation of the population changes in the world and their relevance to the Philippines.

B. Specific

1. Analyze world population growth trends.
2. Explain with the aid of graphs and tables the demographic revolution in the developed regions of the world.
3. Compare and contrast population changes in the developed regions with those in the less developed regions.
4. Explain the factors that have contributed to rapid population growth in the less developed countries of the world.
5. Analyze population trends in the Philippines.
6. Enumerate and describe methods of measuring population increase.
7. Compute population changes from the data gathered or supplied.
8. Analyze and interpret data, graphs, and tables on population.
9. Gather needed information on population.
10. Express personal views and opinions on conflicting views and attitudes regarding population matters.
11. Share one's ideas and views on population changes with others.
12. Realize and accept the idea that a decline in mortality with little or no change in high fertility levels cause rapid population growth.
13. Express an attitude toward the population situation in the Philippines.

II. CONTENT

A. In terms of topics

1. Population Change

   a. Demographic transition
      (1) In developed countries
      (2) Relevance to developing countries

2. World Population Growth Trends
3. Philippine Population Growth Trends
4. Methods of Measuring Population Growth

B. In terms of related ideas

1. The reduction in death rate with little or no change in birth rate causes rapid population growth.
2. Population changes through time.
3. Population changes vary in different countries depending on their level of industrialization, urbanization, and technology.
4. There are factors that contribute to rapid population growth.
5. There are differences in the population changes in the less developed and in the more developed regions of the world.
6. Philippine population, like those of many other nations in Asia, Africa, and Latin America is growing at an unprecedented rate.
7. Population change can be measured.

III. SUGGESTED PROCEDURE

Lesson 1
(3-4 class periods)

A. Objectives

1. Examine population growth trends in the world.

2. Explain, through the help of tables, graphs, and charts, demographic changes in developed countries of the world.

3. Compare and illustrate the differences in population changes between the developed and developing countries of the world.

4. Explain the factors affecting population growth in developing countries.

5. Examine Philippine population growth trends.

B. Opener

Conduct a pre-test. (See Appendix K, p. 118)

This activity may serve two purposes: first, to establish data on the status of students as far as knowledge of and attitude toward demography is concerned; and second, to arouse interest in the subject matter of the unit.

C. Development

1. Tack a map of a city, town, province, or country on the chalkboard.

geographic outline of a city/town/
province/country (See Appendix A, p. 106)

What can you say about the map?

Pin or tack 3 or 4 of this figure, representing persons, on this map.

If each figure represents 1,000 people, how many people inhabit this city/province/country? (Tack more figures on the chalkboard.) How many people are there now? (Add and tack some more figures.) How many people are there now?

If 400 babies are born in the place yearly, and if 100 people, old and young, die each year, what will happen to the population of the place? (Compute the number of births and deaths on the basis of 40-41 births per thousand and 10-11 deaths per thousand.) Let us suppose that every year 100 people move to this place to seek opportunities. What will happen to the population?

How many persons are added to the population yearly?

If this situation continues to occur in 10, 20, or 30 years, what will happen to the population?

Can this situation happen right now?

Students may give hypotheses similar to the following:

a. The population grows by 2,000 people each year.
b. There is a rapid population growth in the city/town/province/country.
c. In 10, 20, or 30 years there will be 20,000; 40,000 and 60,000 more people, respectively, than there are today.
d. In 10, 20, or 30 years there will be a population explosion.
e. If the population continues to grow, there will come a time when there will not be enough space for people to live in.
f. If it gets to be too crowded, and people start to feel the pressure of population growth and what this pressure brings (less food, unemployment, overcrowding, housing problems, pollution, etc.), some people might move or migrate to another place.

Encourage the students to give other hypotheses.

The graph on the population of the Philippines in 1975 (Appendix H-2) may be used to reinforce the hypotheses stated by the students.

What did you notice about the population of the various provinces of the Philippines?

Which provinces seem not to be so overcrowded?

What do you think will be the action taken by provinces that are presently becoming overcrowded?

Allow the students to research on provinces having large populations.

Let us examine the population growth trends in the world and in selected countries to see if the guesses you have made earlier regarding the mock situations presented are true in real situations in the countries of the world.

However, before we do this, let us review the meaning of some terms we shall be using very often: births, deaths, birth rate, death rate, and growth rate. In the situation presented, how many babies were born in the place mentioned? What happens to the number of people in a place when babies are born? In other words, what is the relation of births to population?

In the situation presented to us, how many people die every year? What happens to a population when some people die?

How many people are added to the population?

Mention some events that happened in Mindanao like those in Lanao, Jolo, Tawi-Tawi, and Maguindanao. Discuss the causes why the residents of these provinces migrated to other places. Also discuss the probable consequences that **happened** to the places where these migrants settled.

Does migration cause a change in the population?

(Students might say that people moving in and out of a place add to or subtract from the total population. The teachers may well point out here that migration plays only a small part in the population change of an individual country, but not for a community/province/region of the country. This is because immigration laws prevent people from moving freely from one country to another. As a result, births and deaths, not migration, largely determine the population growth of most countries today.)

From our illustration, we gather a few simple arithmetic facts. What are they?

Students may consider the following: births add to population, deaths subtract from it, and the difference between the two is the natural increase in population.

When we are talking about small numbers, say the population of this class, we can and usually use raw figures or numbers. However, when we deal with additions and subtractions about population and the resultant growth in that population, we use rate. This is a more meaningful and convenient way of expressing additions and subtractions about population and its resultant growth.

In figuring a birth rate, it is convenient to divide a population into groups of 1,000. This makes the arithmetic easier. We then divide the number of births by the number of groups of 1,000 persons in the original population.

The death rate of any population is the total number of deaths for each group of 1,000 persons for a particular year. In population studies, the death rate, like the birth rate, is given as deaths per one thousand.

The migration rate of any population is the number of persons who migrate divided by the total population. It is usually multiplied by 1,000 to show the number of migrants for each group of 1,000 persons in a population for a particular year.

What then is growth rate? How do you find growth rate? How is it expressed? How is it illustrated? How do you distinguish between growth rate and rate of natural increase?

This definition of terms need not be taken up if you feel that students have taken up these terms and they are familiar with them.

2. Tack Appendix B, "World Population Growth", on the chalkboard. Call attention to and arouse interest in the chart or poster by asking the following questions:

What is the title of the chart?

What does the shaded portion represent? How many years of estimated world population growth are depicted in the chart?

You will note that the world population, past and future, is divided into 3 periods. How does the trend of population growth in Period 1 compare with that in Period 2? Period 2 with that in Period 3?

Approximately, how many people inhabited the earth at the time Christ was born? (Point to the chart.)

What can you say about the trend of world population growth from 6,000 B.C. to about the year Christ was born? Why was this so?

What does this dent in the shaded portion (point to Black Death) representing population mean?

About how many people are there in the world today? What is the prospect of world population growth?

It is of utmost importance that the students be given assistance and enough time to read the graph.

This set of questions is intended to bring out the facts about the world demographic revolution, namely:

- Prior to the 17th century, the population of the world grew slowly. The reason for this is that while birth rate was high, death rate was also high.

- At the time Christ was born, a quarter of a billion people lived on earth.

- By 1650, this number had doubled. From then on, growth rates soared.

- Around 1800, further doubling took place.

- About 1930, only 130 years later, the 2 billion mark was reached.

In mid-1972, there were over 3.7 billion people in the world. What is the present population of the world?

3. In order that the students may better understand and appreciate the demographic revolution after the birth of Christ, tack Appendix C on the chalkboard. Call attention to the pictograph, especially to the title.

   a. What do we mean by "More people in less time; world population doubles in fewer and fewer years"? Illustrate.

b. When did the world population hit the first billion mark?

c. How many years later after the first billion mark did the world population hit the second billion mark?

d. In how many years from 1970 to 2000, may another doubling of population occur?

e. What can you say then about the relationship between the annual percent of increase or growth rate and doubling time in years?

The teacher may use the following table to assist students in explaining the Title of Appendix C, p. 108.

Table I
Population Doubling Time

Annual Percentage Increase in Population	Number of Years to Double
0.05	1,400
0.10	700
0.20	350
0.30	233
0.40	175
0.50	140
1.00	70
1.50	47
2.00	35
2.50	28
3.00	23
4.00	17

4. Tack Appendix D (Page 109), "Projections of World Population to the Year 2000." Call attention to and arouse interest in the chart by asking the following questions:

    How is chart 4 different from Appendix B, "World Population Growth"? (This chart should be tacked beside chart 4 for purposes of comparison.)

Call attention to the two lines that leave off from the single line at about the year 1975. The upper line indicates high projection and the lower line, low projection. Population projection is an estimate of the future population which assumes that present or recent levels (amounts or rates) or growth will continue.

In order that the students may better interpret the information given in Appendix D, p. 109, ask them first what they understand by the terms more developed countries and less developed countries.

> How can you characterize the more developed countries in terms of industry and agriculture? In terms of income; education; environmental sanitation; medical facilities; level of technology; number of births and deaths? How can you characterize the less developed countries?

Ask more detailed questions, if necessary, to bring out the information given below.

Teacher Information

Less developed countries refer, in general, to those countries which have lagged behind in the technological, agrarian, and economic revolutions that have occurred in the Western World in the last 150 years. These countries are mostly located in the sub-tropics and tropics and they are now making the herculean efforts to modernize and to raise their standard of living, so that they are best termed "technologically or economically developing."

Ask the students to read Unit IIIof the book prepared by the Social Studies Center.

Characteristics of developing countries:

1) In most developing countries, the majority of the population are scattered in rural areas often in villages or homesteads, to some degree, isolated by poor roads and communications and are dependent for the most part on subsistence "garden-to-mouth" agriculture.

2) Old-fashioned methods of agriculture are usual, and although the tools and methods may be time-hallowed by tradition, and are sometimes adapted to local circumstances, agricultural productivity is low, under-

mechanized, and usually based on small uneconomic landholdings. Food production is, therefore, inefficient and highly dependent on the weather; while the harvest is exposed to much wastages by rodents, insect pests, and molds during storage.

3) The national earning capacity of developing countries is usually low and dependent on agricultural, rather than industrial production. It is very frequently based on one or more cash crops, such as coffee, rubber, cotton, or cocoa, and subject to price fluctuations for these commodities on world markets.

4) Educational problems will also loom large. There is usually a high rate of illiteracy, especially among women. The number of schools is insufficient and a shortage of school teachers is often a major obstacle to the expansion of the educational system.

5) Standards of environmental sanitation, including an easily available, clean water supply and the disposal of excreta and rubbish, are usually defective, with an increased incidence of infections and parasites that are water-borne, spread by flies, or due to fecal contamination of the compound.

6) There is, generally, inadequate medical facilities. Doctors are few - between 1 per 10,000 to 1 per 100,000 population - compared with Western standards in which there may be about 1 per 1,000 population. In addition, there is usually a geographic maldistribution with a high proportion of the total in cities, and a relatively small number in rural areas.

There is similar scarcity of nursing and other paramedical personnel who usually do most of the preventive and curative health work in this thype of country.

7) The mass of population has usually a pre-scientific philosophy, with motives and drives very different from those of the Western World and with unfamiliar, but deeprooted classification of diseases, food, and all other aspects of life, often much related to magic and ultrahuman forces.

The local pattern of customs, attitudes, and practices greatly influences, both for better and for worse, the nutrition, diet, and also modifies the way in which preventive programs can best be developed.

After knowing the characteristics of less and more developed countries, can you give examples of less developed countries? (All countries of Asia, with the exception of Japan, and certain countries of Latin America and Africa belong to the less developed countries.) Give examples of more developed countries. (The United States, Canada, countries of Eastern and Western Europe, the USSR, Australia, and New Zeland belong to the more developed countries.) How is the Philippines classified?

We are now ready to read Appendix D. What is this chart about?

Call attention to the two lines that leave off from each of the single line projecting the population of the world, the more developed regions, and the less developed regions.

At about what year does each single line branch out into two? (At about the year 1975.) The upper line indicates high population projection and the lower line indicates low population projection. Do you know what population projection means?

If nobody in the class can give the meaning of population projection, explain that it is an estimate of future population assuming that the present or recent levels or ratios of population growth will continue.

By the year 2000, what is the low population projection for the world? For the less developed regions? For the more developed regions? What is the high projection for the world? For the less developed regions? For the more developed regions? How do the present population and the population projection by 2000 in the less developed regions compare with that of the more developed regions?

Probe further into the comparisons between developed and less developed regions of the world by presenting Appendix E, "Population in the More and Less Developed Regions of the World, 1850-1968."

Assist the students in interpreting the table by asking these questions:

What can you say about the population trend in the more developed regions? In less developed regions?

How do the growth rates in the two regions compare with each other?

How do the populations in the two regions compare with the world total population?

Give the students time to read the table. If it will help, have them read about the figures and compare the figures as they read them.

Students may further be assisted in understanding demographic changes in the less developed and in the more developed regions of the world by citing specific examples of nations from such regions.

The striking difference between the population in the two regions of the world may be further visualized by taking up specific examples of nations in the two regions. (Tack Appendix F, page 110).

Which of these **nations can** be classified as developed? Less **developed?**

What do the two lines indicate? Can you recall what we said earlier about births? About deaths? What do these two processes do to the population of a country?

What do the toned areas indicate? If the difference between the birth rate and the death rate of a country is great, what will happen to these toned areas? (Point to toned areas in the chart.) To the rate of natural increase?

What can you say about the patterns of birth and death rates in Sri Lanka (Ceylon)? In Mexico? In Sweden? Which countries experienced the greatest increase in gap between birth rate and death rate? What is the term used to refer to this sudden increase in gap between birth and death rates?

What caused the increasing gap between birth and death rates? In other words, what caused the sudden decline in mortality experienced by countries in the less developed regions of the world?

Optional: Tack Appendix G, "Estimated Birth Rate and Death Rate per 1,000 Population for Various Regions of the World, 1955-1959," p. 112 on the chalkboard.

What is the chart about?

Which of the nations listed are classified as developed? Less developed?

What can you say about the birth rate, death rate, and rate of natural increase of countries grouped as more developed and less developed?

Which of these cosntries are contributing greatly to the world total population? Why?

5. Group Work: Divide the class into six groups and have these groups discuss any one of these problems:

What demographic factors contributed to the population changes in the world? How did these factors bring about the changes as witnessed in the less developed and developed regions of the world?

What non-demographic factors caused these population changes? What factors contributed to high birth rates in the less developed regions? To the decline in birth rates in the developed regions?

Show that population growth varies with the level of advancement attained by a country.

A handout on "World Population" (Appendix L, page 123) will assist students in their group discussions. It is suggested that each group should at least be provided with a copy of this handout.

D. Summing Up

1. From the discussions we have had, what general ideas can be deduced from the population changes and situations in the world? In less developed countries? In developed countries?

The following are examples of such general ideas:

a. Population changes through time.

b. There are differences in the population changes in the less developed and in the developed countries of the world.

c. The increased gap between births (fertility) and deaths (mortality), specifically by the sudden decline in death rate, with little or no change in birth rate, cause population explosion.

d. Population changes vary in different countries depending on their industrialization, urbanization, and technology.

Lesson 2
(2 class periods)

A. Objectives

1. Analyze and clarify population data given by graphs, tables, and charts.
2. Gather needed information about population.
3. Express one's beliefs and opinions regarding conflicting beliefs and attitudes concerning population.
4. Convey one's concepts about, and attitudes toward population situations.
5. Realize and accept that a low death rate and a high birth rate cause rapid population growth.
6. Express one's attitudes toward Philippine population conditions.

B. Opener

Warm up the class by showing pictures depicting overcrowding, traffic jams, houses built close to each other, and children playing in squatter or slum areas.

What can you say about the pictures? What do the pictures suggest?

Do you know of places where these situations exist? Cite some such places.

C. Development

1. Tack Appendix H, "Population Growth in the Philippines, 1591-1970", page 113. Call attention to and arouse interest in the chart by asking the following questions:

   How many people were there in our country according to the first population estimate in 1591?

   What can you say about the growth trend from 1591 to about 1800?

   What was the population of the Philippines when the first census was taken under the American regime?

   When did our population hit the 10th million mark?

   When did doubling of our population take place?

   What is the present population of the Philippines?

   What is the annual rate of population growth?

   How does the pattern of population growth in our country compare with those of less developed countries? With those of developed countries?

2. Tack Appendix I, "Highest Population Growth Rates in the World: 1971," page 116. This pictograph will illustrate better the population growth of the Philippines.

   What was the annual growth rate of the Philippines in 1970?

   What other countries have a growth rate that almost equals that of the Philippines?

   What countries have growth rates higher than ours?

   What caused the rapid growth of population in the Philippines? (Tack Appendix J, page 117), "Estimated Rates of Birth, Death, and Natural Increase".)

Students need to realize that since the number of migrants coming to the Philippines is insignificant due to the country's strict immigration law, the growth rate of this country is largely the result of vital processes; birth and death. By contrast, 40 percent of Kuwait's growth is due to immigration.

> At the present growth rate, in how many years will there be a doubling of the Philippine population? (Refer to Table 1.)

3. Confrontation: There are two opinions toward rapid population growth in the Philippines. One opinion is in favor of the growth rate to continue since there are vast lands in our country that have not been developed. The other opinion is that the present economic development of the country can not keep pace with the rapid rate and, therefore, something must be done immediately to avert the imminent problem that rapid population growth brings.

Confront students with these conflicting views or attitudes toward growth rate. Lead them to discuss freely these differences or inconsistencies.

(Refer to Contrary Views on People, by Ernesto M. Macatuno, Social Studies, Second Year.)

D. Summing Up

1. As in the previous lesson on population changes in the world and in less developed and in developed countries what general ideas can you draw from our lesson on population changes in the Philippines?

   Examples of general ideas:

   a. Philippine population, like the population of many other countries in Asia, Africa, and Latin America is growing at an unprecedented rate.

   b. The rapid population growth in our country, like that in less developed countries of the world, is caused by the increased gap between fertility, (birth) and mortality (death, specifically the reduction in death rate, with little or no change in birth rate.

c. There are two conflicting views regarding the population situations in our country.

Lesson 3

A. Objectives

1. Enumerate and describe the methods of determining population size.

2. Account for population changes collected and given data.

B. Opener

1. Recall activity 1 in Lesson 1. If necessary, use Appendix A again.

What is birth rate?

What is death rate?

What is the importance of knowing the birth rate and the death rate of a country?

These questions are intended to recall the following ideas or concepts.

1. Birth rate is the total number of births per 1,000 for a particular year.

2. Death rate is the total number of deaths per 1,000 for a particular year.

3. The difference between the birth rate and the death rate for a particular year is called the rate of natural increase. In population studies the rate of natural increase is usually expressed per 1,000 population.

4. Population growth rate is the increase or decrease in population as determined by natural increase or decrease and net migration. It is expressed in percent.

C. Development

1. The next activity is based on an assignment previously given as follows:

   This may be given as a group assignment. It is exceedingly important to the success of the next activity that the students be given ample time to gather data.

   a. Gather the following information:

      (1) School enrolment for the present school year

      (2) School enrolment last year, five years back, ten years back

      (3) Number of transfers from the school to other schools and from other schools to our school, for the following period: present school year, last year, five years back, and ten years back.

   b. Answer the following questions:

      (1) What is the percentage of increase in our school enrolment from last year? Between the enrolment 5 years ago and now? Between the enrolment 10 years ago and now?

If you feel that the students need assistance in answering the questions in the assignment, then hold a group work session utilizing existing groups in class.

Encourage the students to illustrate, in graphs, the population changes in their school.

2. Reporting of findings: In the report of findings, guide the students to answer the following questions:

   a. Is our school enrolment increasing? Decreasing?

   b. What is the percentage of increase between the enrolment five years ago and the present? Between the enrolment ten years ago and the present?

   c. What is the percentage of increase from last year to the present?

This activity is intended to show that population growth can be determined by two other things: (1) the percentage increase between censuses and (2) the annual rate of increase. This simulation is done on purpose due to the difficulty of obtaining census data in many municipalities and the probable unavailability of census reports prepared by the Bureau of the Census and Statistics in school libraries.

3. Summary: Using Appendix A, p. 106 set up a situation where students can be given practice exercise in computing:

   a. Birth Rate $= \frac{\text{Number of Births}}{\text{Total Population}} \times 1,000$

   b. Death Rate $= \frac{\text{Number of Deaths}}{\text{Total Population}} \times 1,000$

   c. Rate of Natural Increase = BR - DR

   d. Percentage increase in population between censuses which gives the percentage increase in population due to all causes, e.g. percentage increase in population between 1960 and 1970

   e. Annual rate of increase which gives the rate by which population is increasing each year from all causes is obtained by using the compound interest formula:

$$P_t = P_o \ (1 + r)n$$

where

P_t is the final population that grows from P_o, the original population; r is the rate of increase expressed as a decimal; n is the number of years.

D. Summing Up

1. Guide the students to state the ideas or concepts drawn from the lesson, similar to the following:

a. Population change can be measured.

IV. Recall all the related ideas learned in the different lessons. Guide the students to formulate the generalizations based on these related ideas:

1. Population changes vary according to industrial development, technological advancement, and urbanization.

2. Philippine population, like the population of many other countries in Asia, Africa, and Latin America, is growing at an unprecedented rate.

3. The rapid population growth in our country, like that in less developed countries of the world, is caused by the increased gap between fertility (birth) and mortality (death), specifically the reduction in death rate, with little or no change in birth rate.

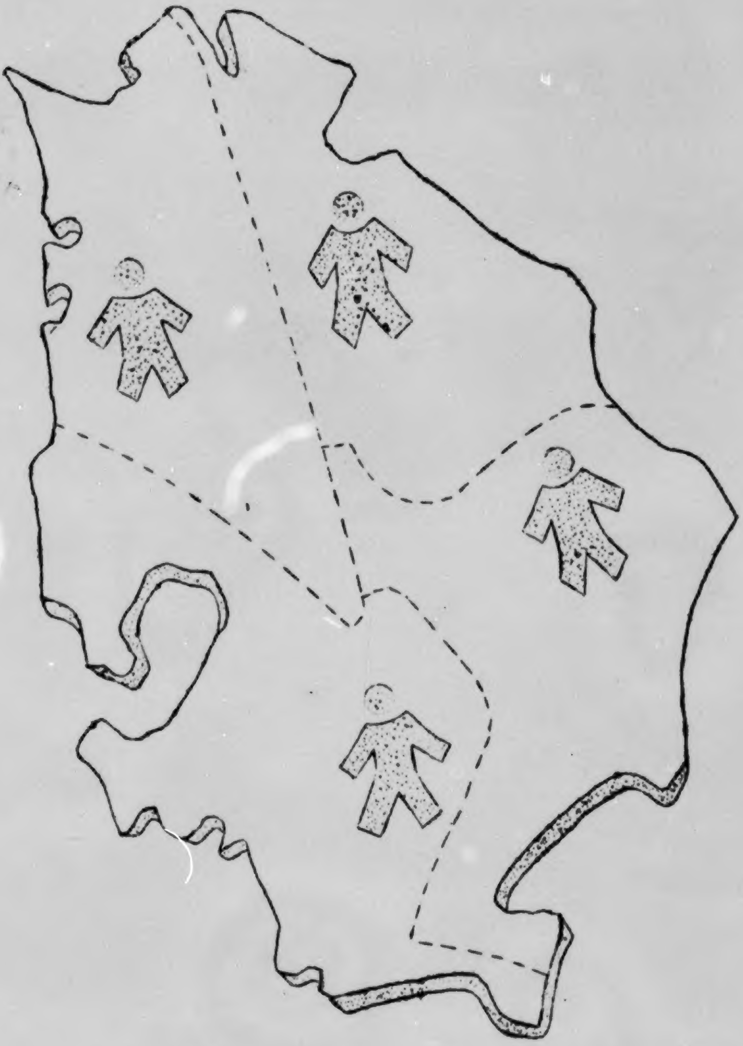
4. There are two conflicting views regarding the population situation in our country.

This general statement may be drawn from the related ideas that the students would give.

Rapid population growth varies because of urbanization.

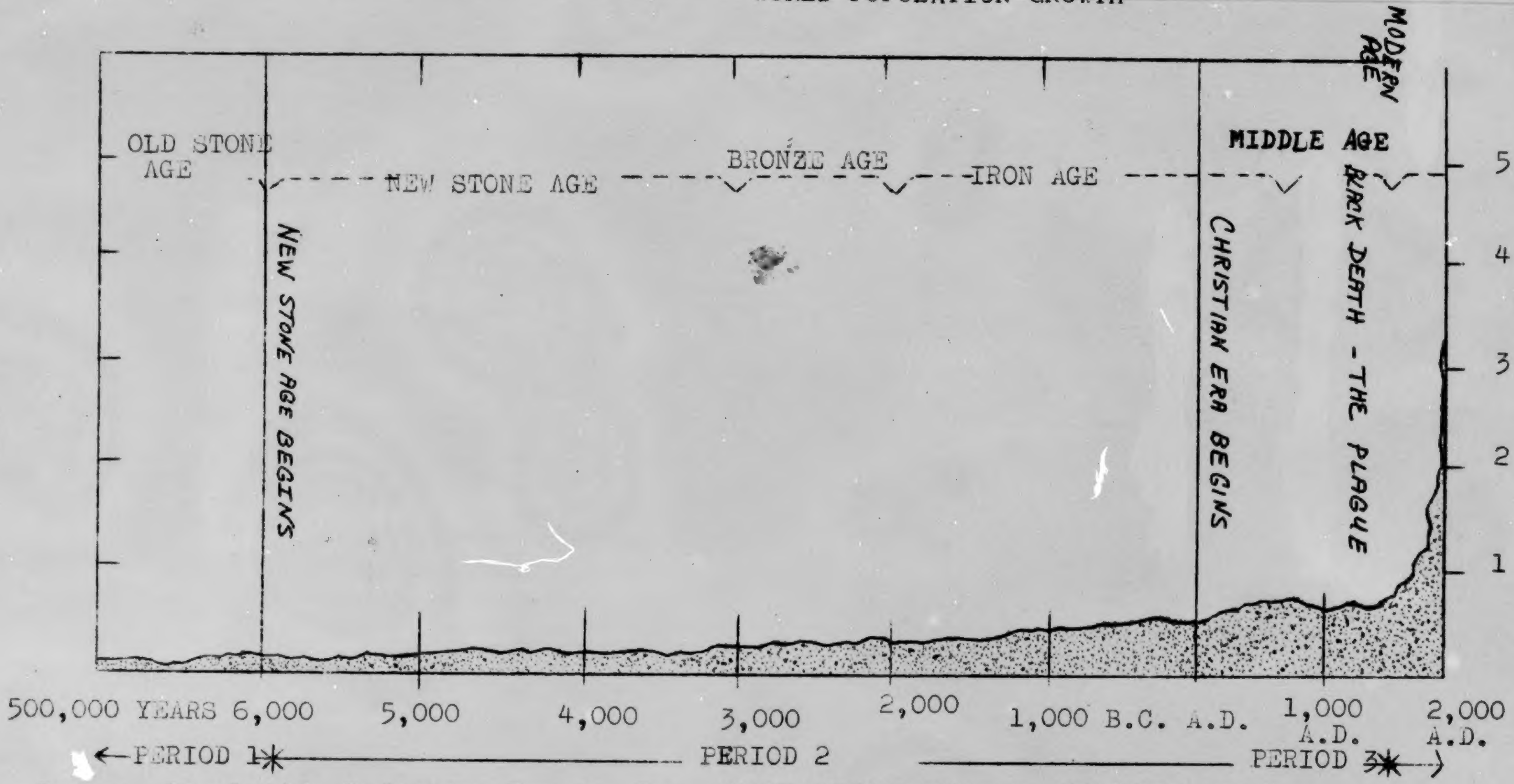
V. Evaluation: Administer a post-test using the same instrument administered in the pre-test.(See Appendix K, p. 118).

APPENDIX A



Demographic Structure of a City, Town, Province or a Nation

APPENDIX B
WORLD POPULATION GROWTH

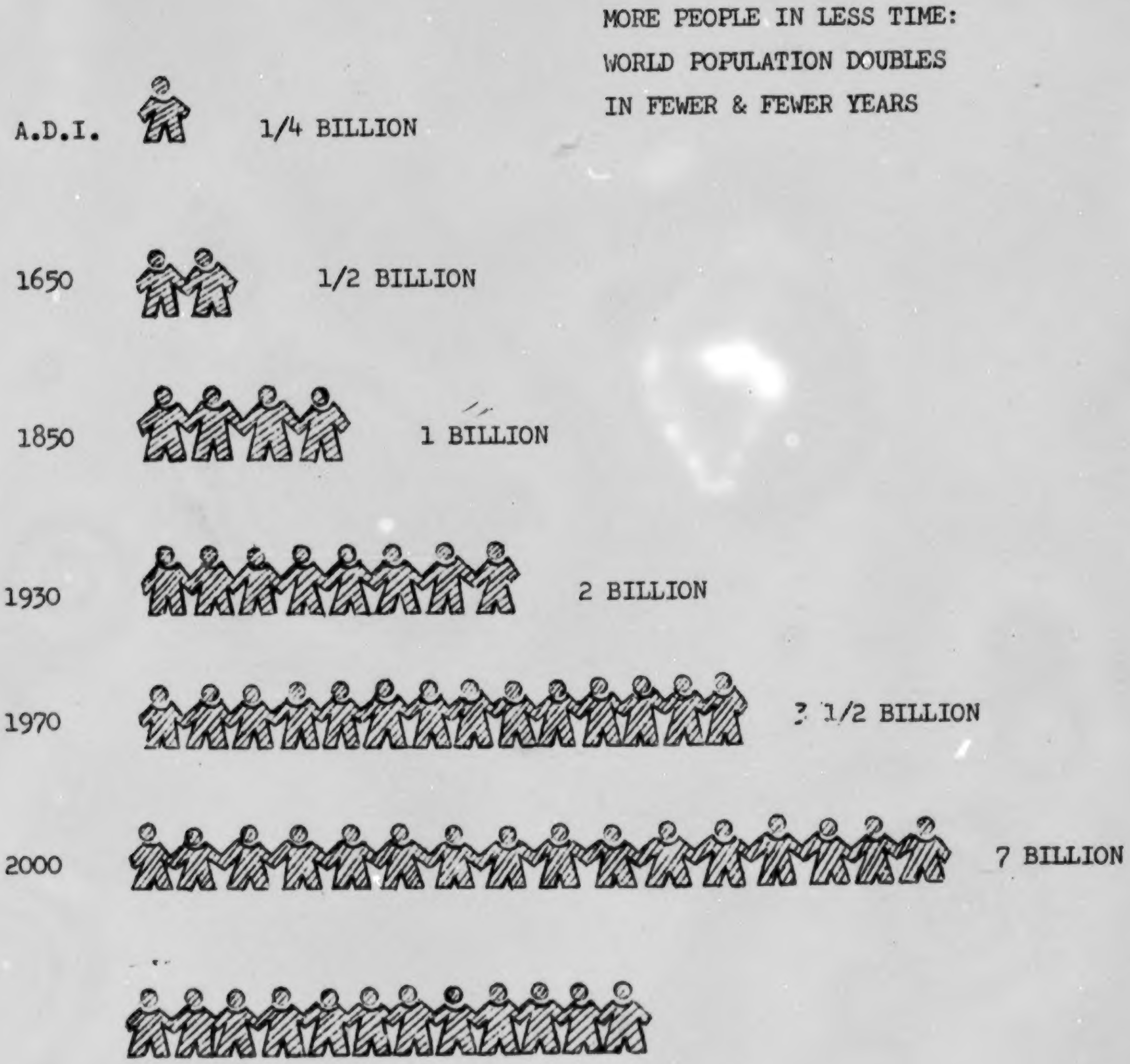


Source: Population Reference Bureau, Inc. POPULATION BULLETIN, FEBRUARY, 1962.

▨ ESTIMATED PAST AND FUTURE POPULATION

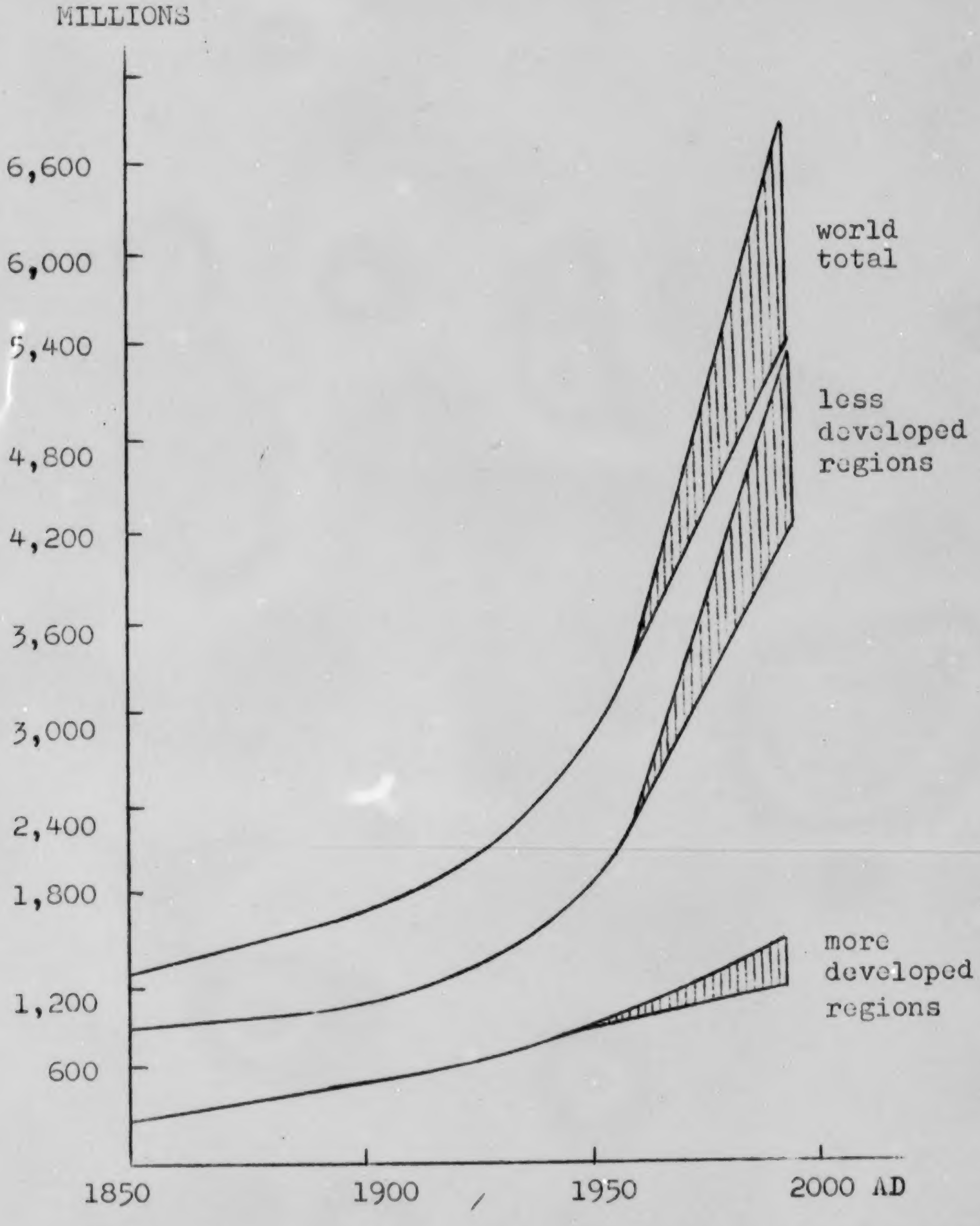
SOURCE: U.P. Population Institute, Philippine Population - Profiles, Prospects, Problems (Manila: Population Institute, 1970), p. 36.

APPENDIX C



MORE PEOPLE IN LESS TIME:
WORLD POPULATION DOUBLES
IN FEWER & FEWER YEARS

SOURCE: Robert J. Lowenherz, Population (Minnesota: Creative Education Press, 1970), p.23.



Projection of World Population Growth to the Year 2000

W. Brass, "The Growth of World Population Control Edited by Anthony Allison (London, Cox and Wyman, Ltd) 1970,p. 149.

APPENDIX E

Population in the More and Less Developed Regions of the World, 1850-1968*

	1850	1900	1950	1968
	Population (millions)			
More developed regions	342	562	834	1,038
Less developed regions	919	1,088	1,683	2,443
	Percent	Annual rate of increase from preceding date		
More developed regions		1.0	0.8	1.2
Less developed regions		0.3	0.9	2.1
	Share of world total population (percent)			
More developed regions	20	34	33	30
Less developed regions	73	66	67	70

The more developed regions are taken to be Europe, the U.S.S.R., North America, Oceania, and Japan; the less developed areas are Asia, (excluding Japan) Africa, and Latin America.

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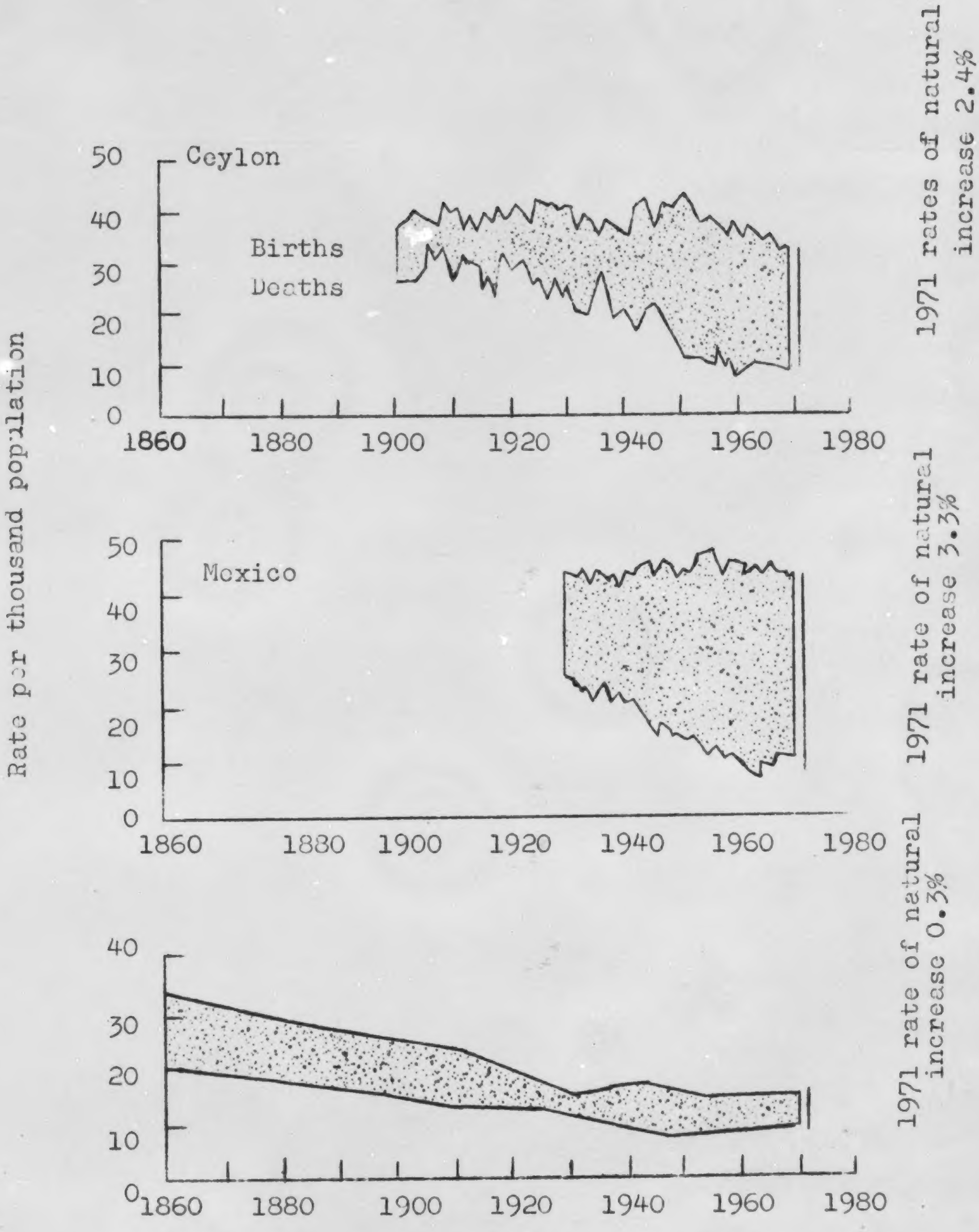
*W.Brass. "The Growth of World Population", in Anthony Allison (ed.) Population Control, Middlesex, England, Penguin Books, 1970, P. 137.

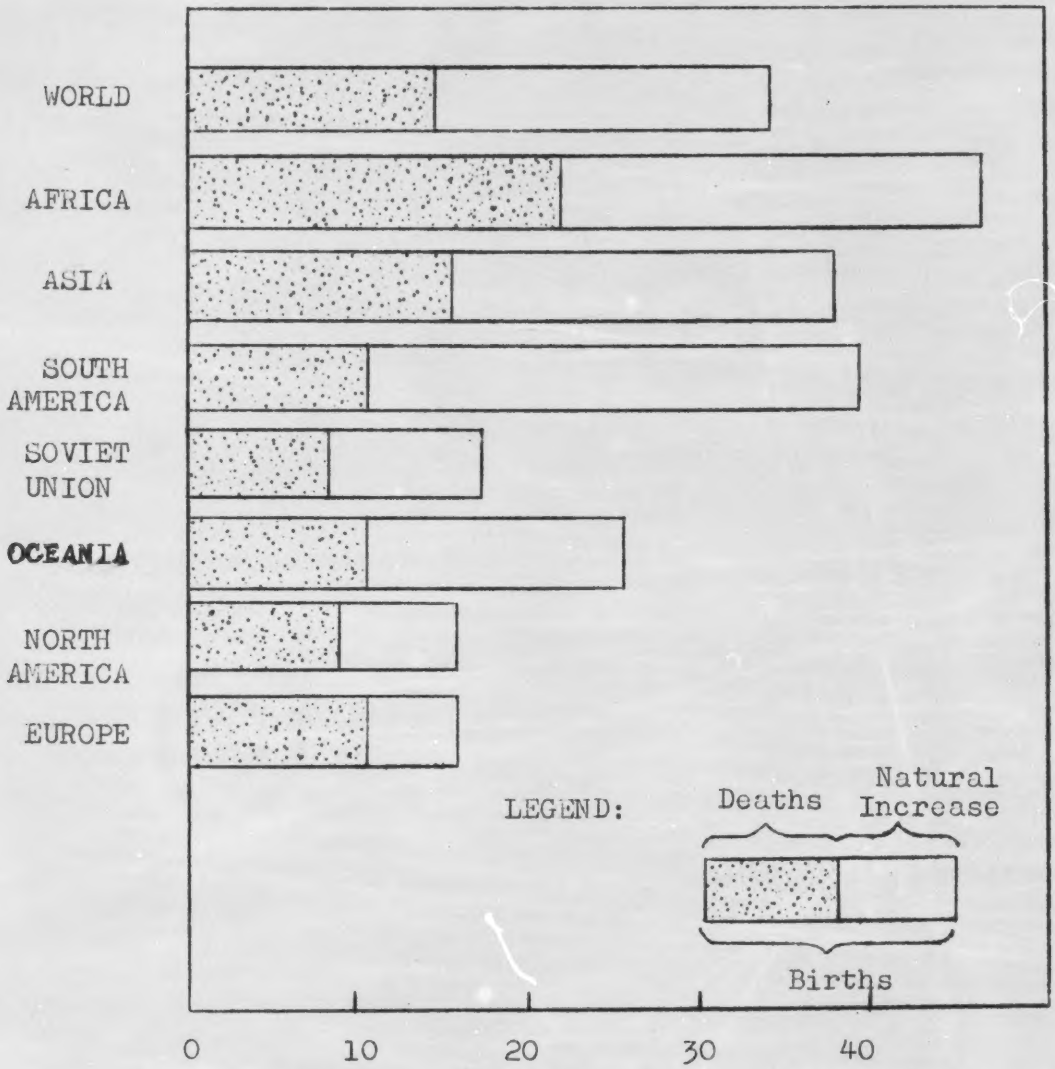
APPENDIX F



Toned areas represents natural increase

Ehrlich and Ehrick, Population, Resources, Environment, (San Francisco: W.H. Freeman and Company, 1972), p. 21.

APPENDIX G



Estimated Birth and Death Rate per 1,000 Population for Various Regions of the World, 1973*.

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*1973 World Population Data, population Reference Bureau, Inc.

APPENDIX H

Population Growth of the Philippines, 1591-1975

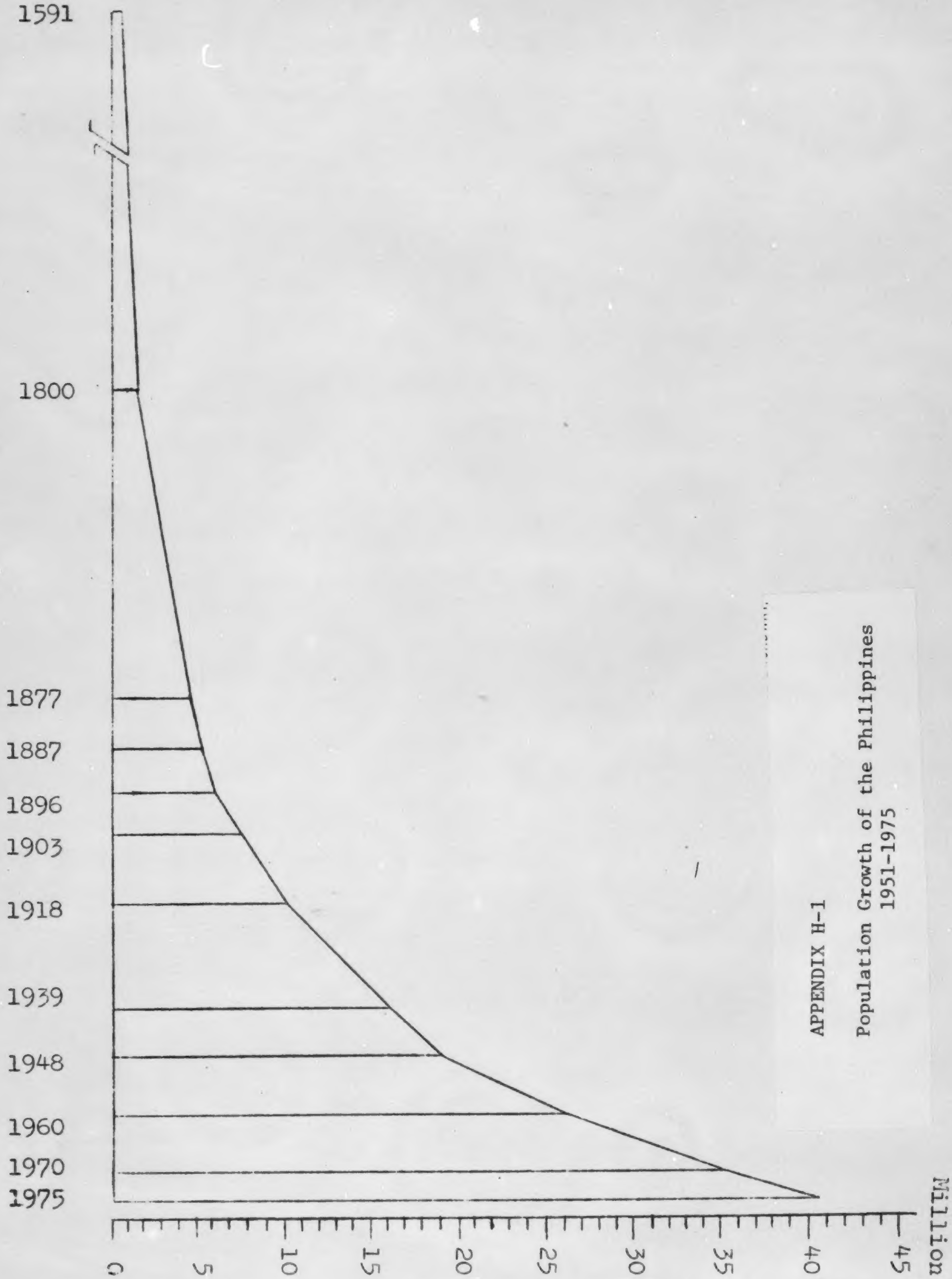
by: Aurora E. Perez

Year	Population	Total Change	Per Cent	Yearly Natural Increase
1591	667,612			
1800	1,561,251	893,639	133.86	4.073
1877	5,567,685	4,006,434	256.62	1.667
1887	5,984,727	417,042	7.49	0.725
1896	6,261,339	276,612	4.62	0.503
1903	7,635,426	1,378,087	21.95	2.875
1918	10,314,310	2,678,884	35.08	1.897
1939	16,000,303	5,685,993	55.13	2.219
1948	19,234,182	3,233,879	20.21	1.906
1960	27,087,685	7,853,503	40.83	3.057
1970	36,684,486	9,596,801	35.43	3.012
1975	41,831,045	5,146,559	14.03	2.660

Source: Census of the Philippines, 1960, Vol. II.
Census and Statistics.

APPENDIX H-1

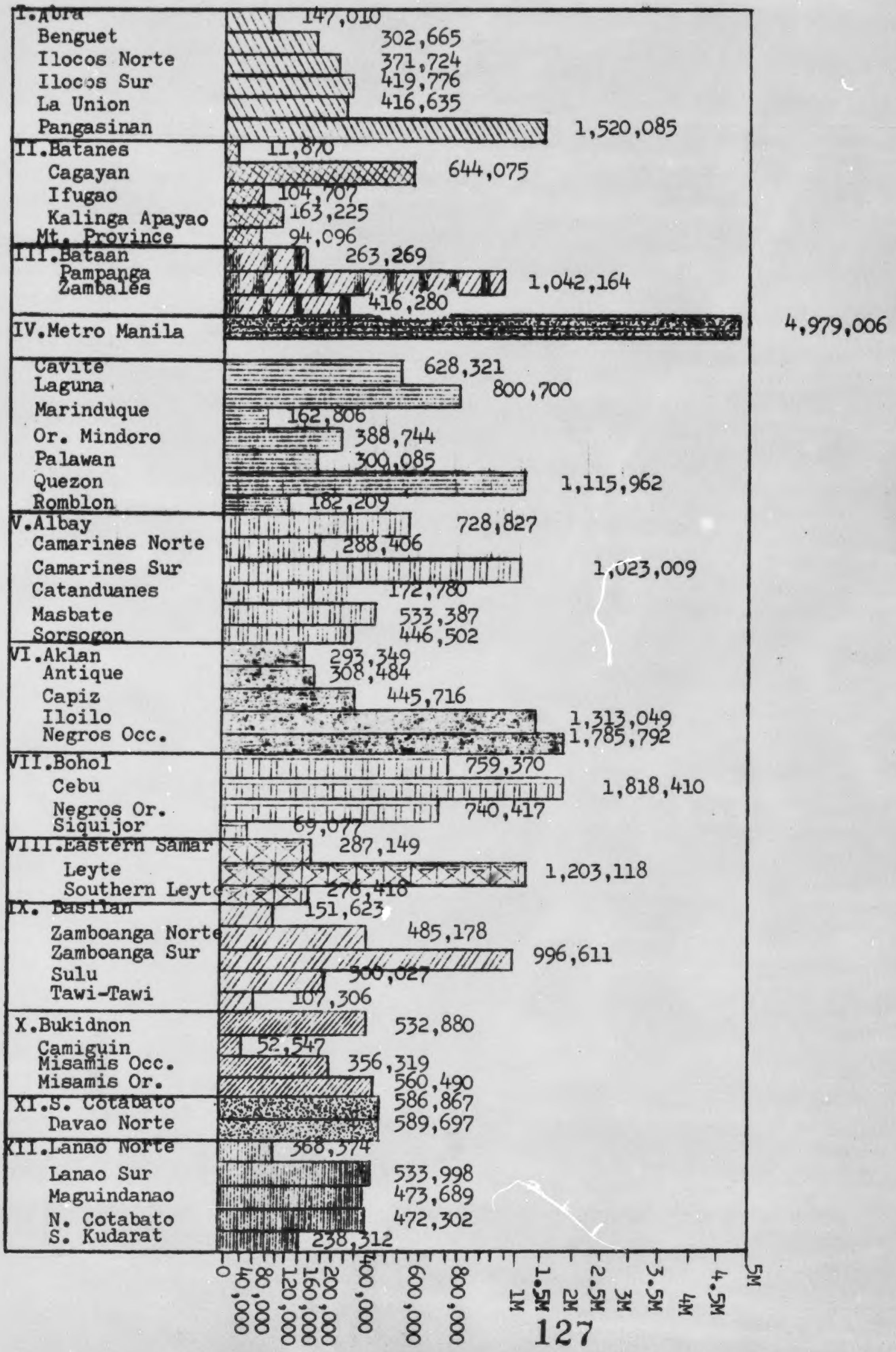
Population Growth of the Philippines
1951-1975



Source: Bureau of the National Census and Statistics, 1975

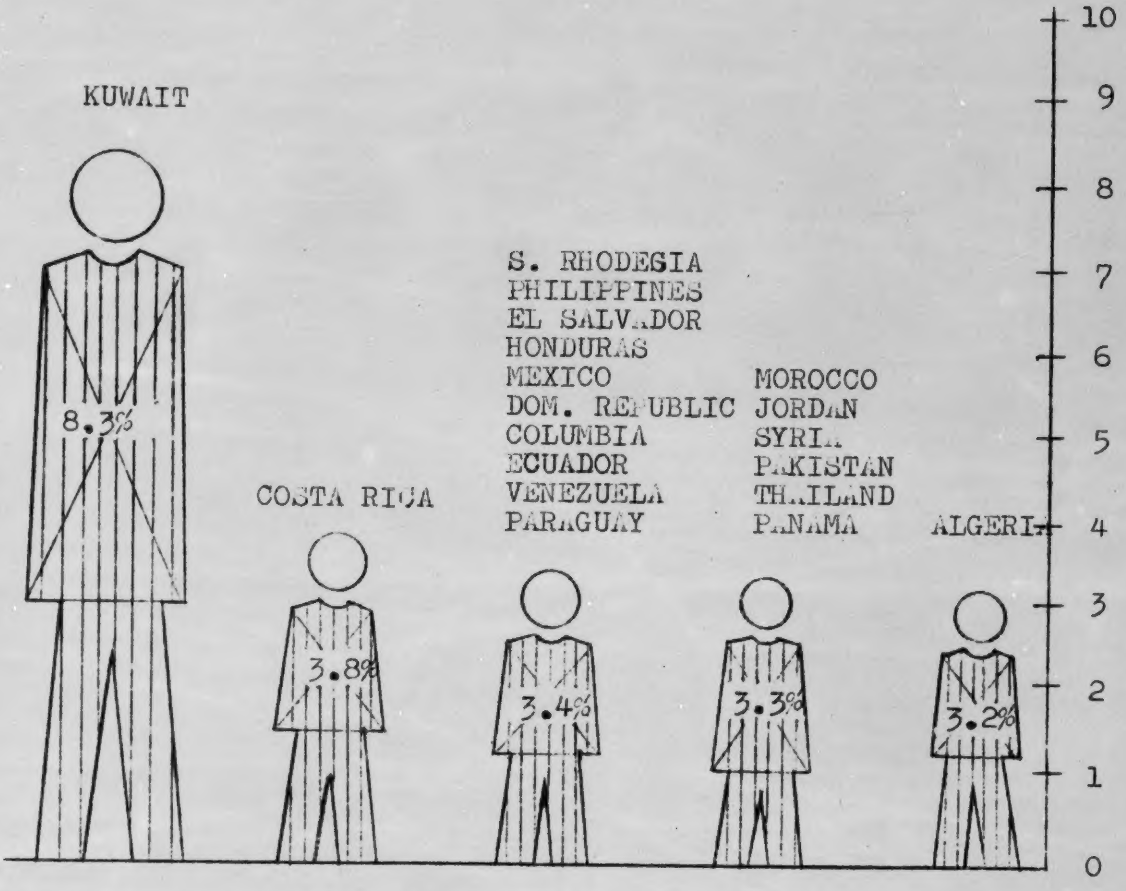
APPENDIX H-2

Population Growth of Certain Regions and Provinces in the Philippines



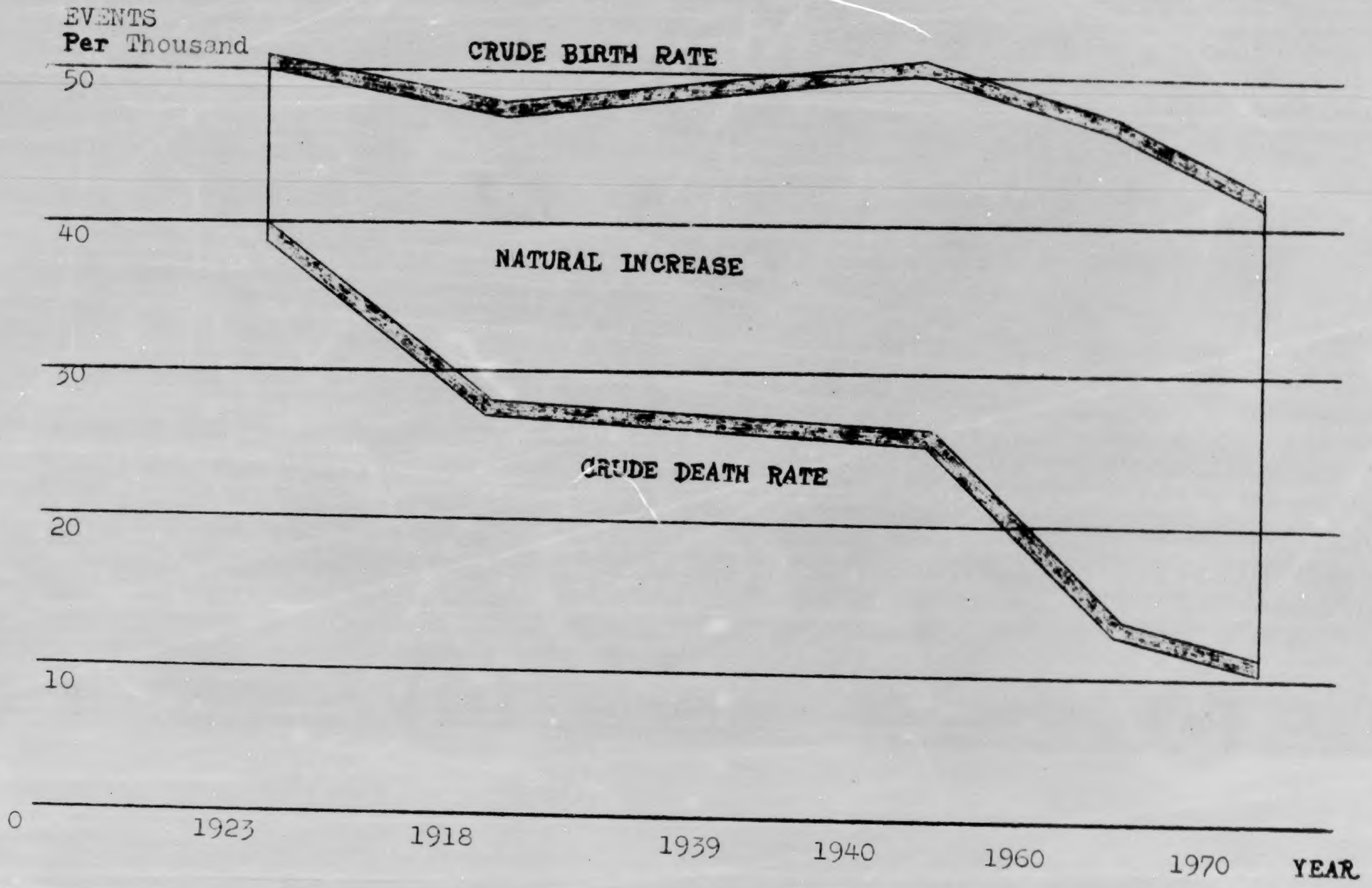
APPENDIX I

HIGHEST POPULATION GROWTH RATES IN THE WORLD: 1970



SOURCE: U.P. Population Institute, Philippine Population - Profiles, Prospects, Problems (Manila: Population Institute, 1970), p. 40.

APPENDIX J



ESTIMATED RATES OF BIRTH, DEATH AND NATURAL INCREASE IN THE PHILIPPINES, 1903-1970

SOURCE: U.P. Population Institute, Philippine Population, Profiles, Prospects, Problems (Manila: Population Institute, 1970),p. 54.

APPENDIX K

I. Knowledge Test

A. Multiple Choice

Directions: On your paper, write the letter that corresponds to the best answer for each item.

1. The total population of the world at present is about

   a. 2 billion.
   b. 3 billion.
   c. 4 billion.
   d. 5 billion.
   e. 6 billion.

2. The total population of the Philippines is approximately

   a. 20 million.
   b. 30 million.
   c. 40 million.
   d. 50 million.
   e. 60 million.

3. The Philippine population is now growing at an estimated annual rate of approximately

   a. 1%.
   b. 2%.
   c. 2.6%.
   d. 3.5%.
   e. 4%.

4. Which of the following situations primarily results in a country's population increase?

   a. more births than deaths
   b. more deaths than births
   c. equal births and deaths
   d. constant number of births and deaths
   e. less internal migration

5. A population growth rate of 3% may be described as

   a. very low.
   b. low.
   c. medium.
   d. high.
   e. very high.

6. If a population continues to grow at a rate of 1% per year, it will double in

   a. 23 years.
   b. 35 years.
   c. 70 years.
   d. 100 years.
   e. 139 years.

7. The death rate of a town means

   a. the ratio between the number of people who die in the town and the total number of people who die in the country.

   b. the total number of people who die in the town in any year.

   c. the ratio between the number of people who die in the town and the total number of people in the town in any year.

   d. the number of people who die in the city divided by the number of people born in the town.

   e. the ratio between the total number of people in the town in any year to the number of people who die in the city.

8. A population that has a growth rate of .0%

   a. has no births and few deaths.
   b. has a balance between birth rate and death rate.
   c. is not growing.
   d. will eventually become extinct.
   e. has many people in the 35 and above structure.

9. The most likely cause of rapid population growth is

   a. constant rate of migration.
   b. high birth rate and high death rate.
   c. high birth rate and low death rate.
   d. low birth rate and high death rate.
   e. low birth rate and low death rate.

10. The major effect of controlling disease is that

   a. more children will be born.
   b. population growth rate will remain constant.
   c. population will not increase.
   d. population will not decrease.
   e. fewer children will die.

11. Which of the following is needed for measuring population growth?

   a. birth rate
   b. death rate
   c. migration rate
   d. all of the above
   e. a and b

12. Which of these countries is classified under one of the less developed regions of the world?

   a. Philippines
   b. Japan
   c. New Zealand
   d. USSR
   e. all of the above

13. In general, which of the following is true about the countries in developed regions of the world?

   a. They have a low birth rate and a low death rate.
   b. They have a high birth rate and a low death rate.
   c. The people in these countries practice contraception.
   d. There are large families in these countries.
   e. None of the above.

14. Which among the following countries has the highest population growth rate in the world?

a. U.S.
b. Kuwait
c. Japan
d. Australia
e. Sweden

15. Which among the following countries has the lowest population growth rate in the world?

a. U.S.
b. Kuwait
c. Japan
d. Australia
e. Sweden

B. Given country X, illustrate with a line graph its growth of population, during the year indicated, as follows:

Year	Population
1603	69,000
1735	88,000
1790	1,500,000
1815	2,050,000
1850	3,500,000
1900	7,560,000
1910	10,500,000
1940	17,000,000
1950	21,000,000
1972	39,000,000

II. Attitude Inventory

A. Directions: Read each statement carefully. Place a check ☑ before the word that describes how you feel about each statement.

1. The Philippine population is increasing very rapidly.

☐ Agree ☐ Disagree ☐ Uncertain

2. There is nothing wrong if the Philippine population continues to grow indefinitely.

   ☐ Agree ☐ Disagree ☐ Uncertain

3. There is need for the Philippine population to decline drastically in the near future.

   ☐ Agree ☐ Disagree ☐ Uncertain

4. Developing countries need more and more people in order to hasten their industrialization.

   ☐ Agree ☐ Disagree ☐ Uncertain

5. Deaths should exceed births if a population is to remain stationary.

   ☐ Agree ☐ Disagree ☐ Uncertain

Key to Correction for the Multiple Choice Items of the Knowledge Test

1. c
2. c
3. c
4. a
5. e
6. c
7. c
8. c
9. c
10. e
11. d
12. a
13. a
14. b
15. e

APPENDIX L

World Population

The number of people in the world today is growing at a tremendous rate. If the present annual rate of two percent continues, twice as many people will be living on earth in the year 2000 as there were in 1965. Now more than three billion, the world's population will rise to more than six billion during that period.

Population growth poses serious problems for most governments in the world because more people have to be fed, clothed, sheltered, educated, and employed. Economic planning has to take account of those needs and desires. It has to be geared to population growth. Ordinary citizens also need to know the facts of population growth so that they can participate intelligently in plans for their country's future and for their own families.

Because different countries are at different stages of development, their population are growing at different rates. The less developed areas in Asia, Africa, and Latin America are growing at rapid rates. In the United States, the Soviet Union, and a few other countries, the population growth is moderate. Fairly slow moderate growth is found in most of the countries of Western Europe and Japan. Thus, growth rate is most rapid in low-income, largely agricultural countries. It is lowest in the economically advanced countries.

Past Population Growth

During most of human history, world population has grown very slowly. The birth rate has normally been high. So has the death rate. Periodic famine, pestilence, and wars have kept the population down through mass death. From about 1 A.D. until about 1700 A.D., the population just about doubled.

The first fairly reliable estimate of world population that we have is for 1650. At that time world population was probably about 500 million. During the next two centuries, world population doubled. What had taken 17 centuries before was not accomplished in two. In less than one hundred years more, it doubled again. And as we have seen, at present rates it will double again in a third of a century.

The First Demographic Transition

Population growth in the past has followed a general pattern with some local variations. This pattern started in Europe about the middle of the 17th century and was repeated in various countries as they experienced the industrial revolution.

Pre-industrial agrarian countries typically have high birth rates and high death rates. Peasants produce for local consumption and there is not much dependence on a wider market. Tools and methods of farming change very slowly. Per capita income is low. Beliefs and customs support a high birth rate. Large families offer very practical advantages. Children start working when they are very young. Not much time, if any, is spent on education. They start to contribute to the family income at a very early age. For their parents, many children mean support in their old age. Few children survive that it is necessary to have a lot of children. In fact, the society could not survive without a fairly high birth rate. The death rate is so high resulting from inadequate diet, bad sanitation, and poor medical practices. The death rate goes up with such calamities as crop failure, epidemics, wars, and other such disasters. The high death rates and birth rates balanced each other, allowing for only very slow growth. People accept this balance of births and deaths as something that can not be changed. It is just a fact of life.

When a peasant society begins to change into a more modern economic structure, the death rate begins to fall. As the economy develops, there is a growing division of labor, improvements in tools and methods of work, involvement of the local village in a market economy, better and faster transportation, the growth of cities, rising productivity, and a rising per capita income. With a steadier food supply and other results of economic development, the death rate falls.

The falling death rate is also due to the application of medical knowledge. The industrial revolution produced an enormous increase in scientific knowledge and in the ability of man to control and, even in some cases, to eliminate disease. Better sanitation and better medical practices also contribute to the decline in death rate.

In the typical historic pattern, the death rate falls first while the birth rate remains high for a time. All societies welcome changes which reduce the number of deaths, but changes which slow down the birth rate are accepted much more slowly. The new pattern at this stage is high birth rates with falling death rates. Today death rates are falling so rapidly as to give rise to what has been termed as "population explosion".

After a while another stage in the demographic transition begins as this pattern is modified. People begin deliberately to control the number of births. The ensuing decline in the birth rate is the cumulative result of a large number of private decisions of families and is not the result of public or government policy. The social factors leading to such decisions are not fully known but it is clear that falling death rates have been associated with industrialization, urbanization, increasing educational levels, and improved position of women. People are no longer fatalistic about either birth or death. Birth and death are now two natural phenomena man has learned to control. As a result, the birth rate falls, following the course of the death rate downward. With both birth and death rates low, population grows at an economically manageable rate. Families are smaller, per capita income higher.

In countries which have already made the transition from a low-income agricultural peasant economy to a higher income, urban industrial economy, this general pattern has been followed. High birth and death rates at first nearly balanced each other, with very slow population growth. Next, the death rate has fallen and the birth rate remained high, resulting in accelerated population growth. Eventually the birth rate and death rate again come into near balance at a much lower level, and once again population growth is slow. This process is called "the demographic transition."

The New Demographic Changes

Beginning about 1940, new demographic changes began in the less developed nations. A new pattern began to emerge-one which resembles the old demographic transition in some ways but which also differed from it in fundamental respects. For the new demographic changes are taking place in a world very different from that of the middle of the 17th century. These major differences are:

1. First of all - and probably the most important - we can today rapidly reduce the death rate without modernizing agrarian economy.. In the past, medical knowledge developed fairly slowly along with the transformation of the economy. There was time for attitudes to change and for adjustments to take place. Some of the effective weapons against death such as the use of sulfa drugs, antibiotics, and various

kinds of insecticides like DDT - are very recent products of industrialized countries; not even discovered after low birth rates, low death rates, and small families had become established in these societies.

In contrast, developing countries have been able to reap the advantages of modern knowledge of medicine and public sanitation without undergoing a modernization of their economies. Ceylon offers a spectacular example of how effective modern programs may be. In 1946 life expectancy at birth was 44 years; by 1954, it was 60, a gain of 16 years in the average length of life over an eight-year period. Part of this dramatic improvement resulted from the DDT anti-malaria spraying campaign. Similar, although not quite as spectacular results may be expected in areas using spraying programs aimed at diseases as yellow fever, sleeping sickness, and typhus.

These programs require little cooperation from the population. Spraying in Ceylon, for example, was done in part by airplane. Unlike earlier death control, what happened in the less developed regions was that the means are imported from outside rather than having been developed slowly with the economy.

Life expectancy in many developing countries is already around 60 years, not far from the 70 years of the industrialized, developed countries. The blessings of modern medicine mean longer life for more people. But today's speed of change and the resulting strain put on the agrarian economy by high rates of population growth may also clog economic growth that the expanding population cannot be supported and death rates will again shoot up.

2. Not only is thenumber of people in the developing countries increasing very rapidly, but the population "explosion" is much larger to begin with than has ever been in human history. The population of India, for instance, estimated currently at 475 million, is close to the entire world population at the beginning of the first demographic transition. It is increasing by 9 million people a year. With a population size as this, even a very slight annual rate of increase means an enormous addition to the population.

3. The earlier population explosion was accompanied by mass international migrations, such as the movement of millions of people from Europe to the New World. There are very few areas in the world today into which millions of people could move.

4. In some developing countries, such as India, the movement of population to the cities does not seem to have been accompanied by a reduction in family size and a slowing down of the birth rate. Although educated people tend to have smaller families, especially the socially mobile parents, the relative size of this more urban group is not yet large enough to lower the urban rate significantly.

Contribution to the large family size norm is the fact that in some developing countries, many government policies are, on close examination, pro-natalist in essence, that is, they encourage births, e.g. maternity leave pay, tax exemptions for every child in the family, awards to parents who have successfully raised many children, etc.

APPENDIX M

A TABLE SHOWING THE TOTAL POPULATION AND THE TOTAL NUMBER OF BIRTHS AND DEATHS OF SEVERAL PROVINCES IN REGIONS IX AND XII

Provinces and Year	Total Population	Number of Births	Number of Deaths
Lanao del Norte			
1973	385,000	8,210	1,394
1974	397,000	10,025	2,277
Lanao del Sur			
1973	481,000	743	42
1974	490,000	901	195
Cotabato			
1973	752,000	16,058	5,208
1974	554,000	8,667	1,975
Sulu			
1973	471,000	989	225
1974	487,000	486	342
Zamboanga del Norte			
1973	455,000	8,795	2,409
1974	473,000	10,648	2,398
Zamboanga del Sur			
1973	1,143,000	14,077	5,362
1974	1,182,000	18,381	5,268

Source: Philippine Yearbook, 1977, pp. 123-138.

References

Hauser, Philip M. The Population Dilemma. Englewood Cliffs, N.J.: Prentice-Hall Cliffs, Inc., 1969, p. 13-17.

Hertzberg, Hazel W. Teaching Population Dynamics - An Instructional Unit for Secondary Students, Teachers Guide, Columbia University, 1965, pp. 3-12.

Rapid Population Growth - Consequences and Policy Implications. Vol. II Research Paper, Baltimore, Maryland: Published for the National Academy of Sciences by the John Hopkins Press, pp. 105-110.

A POPULATION EDUCATION UNIT IN SOCIAL STUDIES

Fourth Year - Planning for the Future

Area : The World - A Cultural Overview
Major Concept: Values (Based on the Scope and Sequence prepared by the Social Studies Center)
Sub-Concept : Spiritual and Moral Values
Unit : Planning for the Future
Generalization: Individual planning creates an awareness of the role of the individual not only to self but also to his family, community, country, and the world.
Suggested Time Allotment: 8-9 class periods

OVERVIEW

To a fourth-year high school student, "Planning for the Future" would probably be of great significance since at this stage, many of the decisions he will soon have to make will influence his later life. Sooner or later, many of these students will finally decide whether to get married, pursue higher education, or look for a job. It is important to impress upon the minds of these adolescent boys and girls that planning their future, is vital. It cannot just be left to chance. The "bahala na" attitude will not work out if one's future is to be a success.

This unit hopes not only to develop the concept of planning and decision-making but also to provide the students with some exercises on how to plan and arrive at decisions on some important life situations, particularly, on marriage and planning for one's family.

The tentative plans of the individual students regarding their future family will depend largely upon their awareness of the population situation both on the micro and macro levels. Emphasis is made on understanding reasons for wanting children, since it is believed that these have a very strong influence upon the kind of family size a couple may want to have.

Lessons involving family planning taken up in health classes and homemaking arts serve to reinforce this unit. It is expected that with the lessons included in this unit, the students will be able to view family planning not only for individual concern but also for relating family planning to the welfare of the family, community, country, and the world. Hence, the students should be able to make plans and decisions about population matters on the basis of a hierarchy of ethical values. In other words, the student, in planning the family he might want to have in the future, should consider that this kind of family will not only be of benefit to him, but will also be of benefit to his family, the community, the country, and the world.

The students are also made aware of the statement of a national policy on population by the government, considering the existence of a population problem. It is important that the students realize the significance of our population policy in relation to individual family-planning efforts.

The sub-unit should be discussed if the Social Studies **lesson** is aimed towards developing values - moral and spiritual. Refer to Unit IV, Chapter 10 of the Revised Social Studies Text.

To obtain better results, all exercises pertaining to growth of population control should be in line with existing population policy.

If, after taking up this unit, the students develop the right attitude in accepting responsibility by being interested in and taking positive action towards family-planning efforts in their community, then this unit will have accomplished its goal successfully.

Various approaches and techniques are employed to develop among the students the ability to organize, interpret, and evaluate facts, issues, and problems.

I. OBJECTIVES

A. General

1. Realize the importance of planning one's future.
2. Understand why there is a need to plan one's family.
3. Realize that reducing the family size is a national concern.
4. Appreciate the fact that a society-oriented individual plans on population matters make for better achievement of national goals.

B. Specific

1. Explain the steps in planning and decision-making.

2. Apply the steps in planning and decision-making to issues relative to planning one's future.

3. Evaluate or re-examine issues, plans, and decisions made according to a set of criteria.

4. Analyze and evaluate factors that tend to influence couples or families to have children.

5. Discuss the importance of planning and decision making on issues relative to population matters considering the heirarchy of ethical values.

6. Plan the size of family one may want to have in the future so that the benefits of family planning may be realized not only by one's family but also by the community, country, and the world.

7. Discuss the national policy of the government on population.

8. Accept responsibility in controlling population growth by developing interest in and taking positive action on family-planning efforts being undertaken by the government in his community.

9. Participate actively either individually or in groups in organizing, interpreting, and evaluating population facts and information.

10. Appreciate the value of planning and decision-making by arriving at tentative plans about one's future.

11. Develop the right attitude toward family planning as a means of solving the population problem of the country by making a plan about the family that one may want to have.

II. CONTENT

A. In terms of topics

1. Planning and Making Decisions
2. Importance of Planning and Decision-Making
3. Life Situations That Need Planning

4. Factors That Tend to Influence Couples or Families to Have Children.

5. Planning and Decision-Making Considering the Hierarchy of Ethical Values

6. Planning Family Size for the Future

7. National Policy on Population

8. One's Responsibility in Reducing Rapid Population Growth

B. In terms of related ideas

1. Planning and decision-making follow a series of steps.

2. There are some situations in life which should not be left to chance but which require planning and decision-making.

3. Planning one's future gives the individual direction towards his goal.

4. Plans for one's future education, occupation, and marriage can be made and should be made early enough.

5. Couples or families have various reasons for wanting children.

6. Beliefs, customs, and traditions affect the size of one's family.

7. Planning one's family should consider not only the good of the individual but also that of one's family, community, nation, and the world.

8. Plans and decisions for one's family size affect population growth.

9. Family planning is a national concern.

10. Individual family-planning efforts should be in consonance with the national population policy in order to achieve more effectively the goals of the government.

SUGGESTED PROCEDURE

Lesson 1

A. Objective

Explain the steps in planning and in making decisions.

B. Opener

Show a picture of a beautiful house and ask the following questions:

What have you to say about this picture of a house? Why do you think this house came to be constructed as beautifully as this? (Accept as many answers as the class may give, but the teacher should lead them to the fact that planning had been an important consideration in the construction of the house in the picture.)

Probably the owner made plans to have a beautiful house. What is your idea of planning?

C. Developmental Activities

1. Presenting the Steps in Planning and Decision-Making

Suppose you were the owner of the house in the picture and you were asked how you came to construct such a beautiful house, what would you say? Wouldn't you like to know what steps the owner took in planning the construction of his house? (This activity should lead to the presentation of the steps in planning and decision-making.)

These steps may be printed on pieces of tagboard and presented one by one to the class.

a. Set the goals.
b. Determine ways of attaining the goals.
c. Choose some alternatives.
d. Implement the plan.
e. Evaluate and revise means and goals.

2. Carrying on a Buzz Session

Have the class form small groups and carry on a buzz session for about ten minutes on planning activity. Remind them to consider the elements involved and the steps in planning. Some members of the class might have had experience in planning activities which they had done previously such as holding a party, celebrating special occasions, making a project, etc., while others may not have had any experience at all. The purpose of this part of the lesson is to find out the extent of the student's background in planning and decision-making.

Each leader of the group may report the result of the buzz session by writing on the chalkboard the work of his group. After the reporting, recall the steps in planning and decision-making. The class compare those with their work.

3. Setting Goals

Let's go back to the house in the picture you have just seen. What do you think was the goal of the owner? (Probable answers of the students may be as follows):

a. To build a house that is not only beautiful but also within his financial means
b. To build a house that will be the most beautiful in the community.
c. To build a house which he can still afford because his children are not yet in college or which his family can enjoy and where they can live in comfort

(The class may contribute other answers.) Which of these goals do you consider as the best? Why do you think so?

Let us analyze the elements involved in setting goals. What are these elements? If you analyze goal c, what are the elements involved?

Purpose - To build a house
When - While his children are not yet in college
Resources - The cost is within the finances of the family
Value - The enjoyment and comfort of his family

What elements are missing in goals a and b? Why is it important that in setting goals these elements be considered?

4. Ways of Attaining the Goals

Once the goals have been formulated, what would be the next step? The following alternatives to attain the goal might be considered:

Which would be more expensive, to construct the house when the children are still young or wait until the children have grown up and have finished studying?

Should they sacrifice comfortable living now and wait until they have saved enough for constructing the new house or should they construct the house now and live comfortably and cut down their expenses on non-essentials?

After considering these alternatives, the owner of the house decides which is a better alternative to realize his goal.

Once he has made the decision on the alternative, he thinks of ways and means of implementing the plan.

5. Evaluating Means and Goals

In the course of the implementation of the plan, the owner makes some evaluation on whether his goal is being realized or not. There might be some problems that would necessitate revision of the goal, and of the ways and means of attaining it.

Do you think this process of evaluation is necessary in planning and decision-making? Why?

C. Summary

After you have gone through this exercise, are you now ready to summarize the steps in planning and decision-making?

Referring to the situation just presented in planning a house, what do you think would have happened if no planning had been done?

Why is it important to plan and make wise decisions in any activity we may want to do?

Lesson 2

A. Objectives

1. Use different steps in planning and decision-making.
2. Review issues, plans, and decisions formulated according to one guideline.
3. Give importance to the benefits derived from sound planning and decision-making by following the correct and appropriate planning for one's future.

B. Opener

Introduce the song "Bahala Na Raw" (To be sung to the tune of "Que Sera Sera")

"Bahala Na Raw"

When I was just a sixth grader
I asked my parents, "What will I be?
Will I continue or will I not?"
This is what they told me.
"Que sera, sera, whatever will be,
will be
The future's not ours to see.
"Bahala na raw."

When I graduated from high school
I asked them once more, "What will I be?
Will I continue, or will I work?"
This is what they told me.
"Bahala na raw "Whatever will be,
will be
The future's not ours to see,
"Bahala na raw."

And so I asked them finally,
What other plan do they have for me?
Has there been any, or none at all?
This is what they told me.
"Que sera, sera, so sorry are we,
dear one,
The future we leave to chance,
So we have no plans."

And so before I went to bed,
I asked my poor self, "What will I be?
Will it be college, job or marriage?"
I myself cannot say.
Que sera, sera, my future depends on me,
Bahala na cannot be
I must plan today.

What is the implication of this song? Should we leave the future to chance? Why? Why do we say that planning gives one a sense of direction? What is your comment about the term "bahala na?"

C. Development Activities

Very soon you will graduate from high school. What do you intend to do after graduation? Cite only the major activities you intend to do. Do you think you need to plan your future? If you do, how would you go about planning your future?

On the basis of what you have learned regarding planning and decision-making, let us have some exercises on how you could tentatively plan your future.

1. Planning the Future

Let us compare planning your future with that of planning the construction of a house. What guidelines should you remember in planning? Ask the class to make a listing of pointers such as the following:

a. What is/are the goal/goals you want to achieve?
b. What are your alternative means or ways for attaining them?
c. Among these alternatives which one will best achieve your goals?
d. How would you implement your plan?
e. If there is a hitch or snag in the implementation of the plan, what should be done with the goals?

2. Steps in Planning and Decision-Making

With a given list of sample goals and alternatives, such as the ones below, call on individual students to discuss orally how they will apply the steps in planning and decision-making:

a. Set goals.

- To finish college
- To be successful in my career
- To attain a happy and successful married life

b. List alternatives.

- Have a strong educational background by finishing college.
- Get married after high school graduation.
- Get a stable-paying job after college.
- Find a job after finishing high school.
- Postpone marriage until after college graduation and think of it only after I have found employment in a steady job that pays well.

c. Choose the best alternative to realize goals. Which is the best alternative? Why? (With a strong educational background and a college training, one can compete better in getting a steady job that pays well. And with a steady job that pays well, one has better chances of success in life than one who has less education, training, and income.)

At this point, the class may discuss the pros and cons of the issues on whether to go to college and marry later, or marry soon without the benefit of a college education.

d. Implement the plan.

Those which need immediate action:

- Study hard and finish high school.
- Save for a college education.

Those which need later action:

- Study hard to obtain a college degree or diploma.
- Look for a steady job that pays well after finishing college.
- Decide when to marry.

e. Evaluate goals and means of reaching goals. When should you revise your goals?

Ask a student to list on the chalkboard all the reasons for marrying that have come up in the brainstorming session. Such may be love, economic security, desire for a home and children, parental desires, money, companionship, sexual attraction, escape from loneliness or from parental home, social position and prestige, pity, spite, adventures, common interests, etc.

Likewise, have the reasons for not marrying such as lack of opportunity to meet eligible marriage partners, interest in one's career or job, too long a delay in deciding. lack of interest in sex, fear of sex, parental devotion, etc. be listed on the chalkboard.

Considering the reasons for marrying and for not marrying, do you think you would want to marry or not? If ever you choose to marry, what might be your reasons?

How would you know that you are ready for marriage?

Present a checklist: "Are you Ready for Marriage?" (Appendix A, p. 153) Have the class check those items which they think would consider them ready for marriage. After they have accomplished the checklist, let the students decide whether or not they are ready for marriage at their present age.

2. Planning Family Size

If you contemplate getting married some day, would you think of planning the family you may want to have? Why? What is your idea of family planning?*

Confront the students with this question: Do you believe as some people do, that to be happy and successful in marriage, a couple should always have children? Get divergent views from the students on the question mentioned.

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*Family Planning is a concept of enhancing the quality of families which includes the regulating and spacing of child birth, helping sub-fertile couples beget children, and counselling parents and would-be parents.

D. Summary

1. Guide the class to summarize the important points in the lesson by answering the following:

   a. Why is it important to plan one's future?
   b. How do you plan your future?

Commitment

Make a tentative plan of your future considering the steps in planning. Evaluate your plan by referring to the pointers in planning.

Lesson 3

A. Objectives

1. Analyze and value the factors that influence families in having children.

2. Plan the right family size in order to achieve the benefits derived from family planning for the good of the family, the nation, and the world.

B. Opener

As a springboard for this lesson, mention the fact that in the previous lesson, one of the goals set by a high school student is to attain a successful and happy married life. Tell the class that while it is a general tendency for most people to marry since they consider marriage a way of life, not everybody gets married.

C. Developmental Activities

1. Determining Readiness for Marriage

Have a brainstorming session on this issue: Why do most people marry, while some do not? (See BIT on how to conduct a brainstorming session.)

Since there are no right and wrong answers in a brainstorming session, all answers should be accepted.

Let the students conduct a buzz session on the reasons for wanting children. Each group can write its work on the chalkboard so that the whole class can comment on each of these reasons to find out whether or not it is a good reason.

Ask the students to cite beliefs, customs, traditions or practices that encourage large or small family size. Have a class discussion on the validity or soundness of such beliefs.

Examples of beliefs that encourage large family size are the following:

a. Children are a blessing from God.
b. The more, the merrier.
c. What is good for three will be good for five.
d. Many children mean many hands at home and on the farm.

Examples of customs and practices that encourage large family size are the following:

a. It is usual for relatives to live with a married son, a married daughter, a married sister, or a married brother. This makes it easy for the mother to rear many children.

b. Some rural parents get their children employed. Many grown-up children mean more income for their parents.

c. In the urban areas, beggars use their small children for begging to get the sympathy of the alms-giving public.

d. People look down on childless couples and take pity on an only child.

e. It is the practice in some places to marry when the moon is on the rise. People believe that a half or a full moon will ensure abundance of children.

f. A childless married man or women is not selected as a wedding sponsor because the couple who chooses him or her may not have children.

A newly-married couple would like to plan their family. If this couple, Mr. and Mrs. Santican, were under the strong influence of their beliefs and practices regarding large family size, how would you advise them so that they would be more realistic in their plans? What factors would you suggest for them to consider in planning their family?

From what you have learned about the process of planning and decision-making, how would you help the couple arrive at a decision on the family size they may want to have?

Ask the class to recall the steps in planning and decision-making. Let the students apply these steps in planning the couple's family. The discussion may be in the following manner:

Goal - To provide adequately for one's family

Alternatives: a. Beget any number of children.
b. Limit the number of births.
c. Space the births.

Factors to Consider

costs of rearing children and their education
finances of the family
employment of the father
age and health of mother
nature of work of mother, if employed
relationship of family members
space or accomodation
community facilities and services (health, school, recreation, transport, etc.)
physical environment
natural resources
government services
etc.

Choosing Alternatives

After considering the above factors, choose your alternative.

Implementing the Plan

If the couple chooses to (b) "limit the number of births" and to (c) "space the births" in implementing their plan, they should know how to go about family planning and where they can get information on family-planning methods. How can you help the couple in this respect?

Evaluate the goals, ways, and means after implementing the plan. If the goal is not achieved, then they try to find out where the problem lies and to decide other ways of solving the problem.

3. Planning and Decision-Making Based on the Hierarchy of Ethical Values

Ask some students to report on a previous assignment on the population situation of the Philippines and of the world. (See BIT for "World Population" and "The Population Problem in the Philippines.") If records are available, the population situation of the community may also be reported.

What is the population problem of the Philippines?

What do the population data tend to show regarding the population growth of the Philippines? Of the world? Of your community?

Considering the population problem of our country, why would it be important that in making your decision, you should think not only of yourself but also your family, the community, the country, and the world?

Supposing a well-to-do father wants to have as many as a dozen children. After all, he can very well afford to do so. How would this desire of his affect his family? How would this affect the community resources, facilities, and services? The country's progress and general welfare? The entire world? In other words, his desire to have a large family would affect both the micro and macro levels of the population situation.

Supposing a well-to-do father decides to have as many as a dozen children. After all, he can very well afford to do so. Do /you think his wife will be happy about this decision? How do you suppose the other members of his family will be affected? If there were many other fathers in the community who will decide to have a large family, what will be the effect of this upon the community resources like land, food, water, etc? Upon the community facilities and services like school, hospital, transportation, etc? If this community is multiplied by a hundred or a thousand other similar communities, what will be the effect upon the country's progress and general welfare? What do you think is the effect of one country's population situation on the whole world?

Explain further to the class that population problem affect everybody and every nation. Alan B. Chalkley of DEPTH news stated in the September 21, 1971 issue of the Manila Chronicle:

> "Population problems span oceans and link everybody. First, a poor and overpopulated neighbour is a poor trader for your own goods; second, a poor and overpopulated neighbour can be an envious neighbour, and envy creates bad political relations; third, a poor and overpopulated neighbour is a source of illegal immigrants; also of possible diseases."

Would it not be unethical if one gives priority to one's self in deciding population matters like family size? What do you think should be ethical in deciding population matters, i.e., decision when to marry and one's family size?

What other solutions can you think of to solve the population problem of the Philippines?

The children may mention the following:

a. Not marrying at all
b. Increasing food production

How will delayed marriage/not marrying and increased food production affect the population situation in the country?

D. Summary and Conclusions

Based on the foregoing activities, list down the important points or conclusions that you have learned.

(The students may arrive at related ideas similar to those listed at the beginning of the unit.)

Commitment

Should you decide to marry, when would you marry and what kind of family size would you like to have?

Lesson 4

A. Objectives

1. Discuss the importance of planning and decision-making regarding population and ethical issues.
2. Discuss national population policy or law.
3. Accept the responsibility in curbing population growth by developing interest in and cooperating with the government in its campaigns.
4. Cooperate in organizing, generalizing, discussing, and valuing population information and facts.
5. Develop proper attitudes toward family planning as a means of solving population problem through planning one's family size.

B. Opener

Ask the students if they know of any family-planning activities being undertaken by both private and public agencies in their community. They may mention what private clinics, the rural health unit, and other agencies are doing with regard to family-planning services.

Why do you think the rapid population growth of our country has become a national concern?

C. Developmental Activities

1. When our country was faced with some major problems such as natural calamities like floods and typhoons, there was a necessity for immediate action to solve these problems. What policies were formulated to help meet these problems?

Explain that the government usually formulates a policy which becomes the basis of programs or activities to help meet these problems. Develop the concept of policy.

2. Do you believe that our country has a population problem? If so, then we must have a national policy on population. Have you come across our national policy on population?

Present to the class "Revising the Population Act of Nineteen Hundred and Seventy-One." (See BIT). Have someone read aloud the Declaration of Policy.

> Why did our government declare a national program of family planning involving both public and private sectors? Should couples be forced to adopt family-planning activities which are against their religious beliefs and values? Can you think of examples of family-planning activities that are against religious beliefs? (One example is the use of artificial contraceptive methods. This is against the official stand of the Catholic Church.)

Have a student read Section 3 of the Revised Population Act. Ask the class what this section is about. Then have students take turns in reading the purposes and objectives of the Commission on Population (POPCOM).

> Are you aware of any programs, projects, or presidential decrees designed to implement our national policy on population?

Discuss with the students the Population Education Program (PEP) of the Ministry of Education and Culture (MEC). Stress that its principal goal is to make the children and youth aware of the population situations in their community, country, and the world so that they will develop rational and responsible decisions and actions on their family size and other population matters. Discuss also the effects of the presidential decree limiting to four the number of dependents or children entitled to income tax exemptions and the decree enjoining employers to give maternity leave with pay up to the fourth pregnancy only.

What other agencies are involved in reducing the birth rate in the Philippines? (See BIT on family-planning agencies.)

What is the principal method that they use to implement this goal? (Provision of family-planning clinics) How do family-planning clinics complement population education in the school in reducing the high rate of population growth? (Family-planning clinics work with adults of child-bearing age while population education in the school has for its target the children and youth who will be the future parents.)

Do you think it would be more effective if all efforts at planning the family were in consonance with our national policy on population? Why? Do you think it would be good if all agencies working at reducing the family size coordinate their efforts? Why?

Explain at this point that POPCOM is the overall government agency which coordinates all projects on population, both public and private, which are being funded by it.

> Do you think that only our country has a national policy and programs on population?

If the students cannot cite examples of countries with population policies and programs, mention that Japan is one of the earliest to embark on a family-planning movement and has now successfully achieved a low level of fertility. Sri Lanka, Taiwan, South Korea, Hongkong, and Singapore have achieved a noticeable lowering of fertility in the last decades due to their family-planning programs. India, Malaysia, Pakistan, Indonesia, Iran, Nepal, South Vietnam have established population programmes but whose effects on fertility are not yet clear. And so do other countries in Latin America and Africa. Even the developed countries have their population policies and programs although their population problem is of a different nature.

And to further confirm that the population problem is not only a national but an international concern as well, present the following:

"Declaration on Population" issued by the Secretary General of the UN on Human Rights Day, December 10, 1966 which reads in part:

> "We believe that the population problem must be recognized as a principal element in long-range national planning of governments to achieve their economic goals and fulfill the aspirations of their prople."

Have the students discuss how they can participate in family-planning activities being undertaken by either the public or private agencies in their community. Involvement of the students in family-planning activities may be in the form of enlightening couples on the importance of family planning, recruiting acceptors for family planning, making posters to "sell" small family size or participating in seminars or workshops on family planning.

Assign the students to interview local doctors of puericulture centers, clinics, and hospitals on how the students may get involved in the family-planning programs.

Make the students report to the class from time to time their activities regarding family planning.

C. Stating Generalizations

Have the students recall the conclusions or related ideas that they developed in the different lessons. Ask someone to write these on the chalkboard as they are given.

> Let us look at all thse conclusions. Can you make a bigger generalization that will embrace or include all of these? (The children may arrive at the generalization or at a similar one at the beginning of the unit.)

D. Culminating Activity

1. Plan a field trip to a family-planning center if there is one in the community and observe the way couples are persuaded to accept family planning.

Do you think that such a method would be most persuasive? Suggest other methods which you think are more effective.

IV. EVALUATION

The following is a sample paper-and-pencil test based on the objectives of the unit. As such, it is designed to appraise knowledge as well as the skills and attitudes or values. The number of items may be increased and the construction of each item simplified to suit the ability and needs of the particular group of students to whom this test will be given.

An essay test and/or informal means of evaluation such as observation of student's work, checklists, etc., may be used in place of, or to supplement the paper-and-pencil test given here.

Directions: Select from among the alternatives the best that will answer each question.

1. Considering your present situation, which goal will need immediate action from you?

   a. To select a life partner
   b. To decide on what college course to take
   c. To decide whether to pursue a college course, get married, or find a job
   d. To make plans for getting married

2. Which should be the first step in making plans?

   a. Setting up of goal(s) or objective(s)
   b. Making a decision
   c. Listing alternative means
   d. Determining needs and resources

3. Which is the most important reason for making plans?

   a. To develop thinking power
   b. To develop concern for other
   c. To achieve one's goal
   d. To economize on money

4. If you were to make a decision or plan on the size of your family, which would you use as the basis of your decision?

   a. Individual welfare
   b. The welfare of the family
   c. The welfare of the nation
   d. The welfare of the world

5. What action should you take regarding the number of children that you would like to have?

   a. Leave it to chance.
   b. Leave it to the will of God.
   c. Plan the number desired.
   d. Uncertain.

6. Which of these life situations needs the least planning?

   a. Saving for a college education
   b. Finishing high school
   c. Looking for a job
   d. Joining the graduation exercises

7. Which of the following means or ways will most effectively carry out the goal of finishing a high school education early?

   a. Getting a part-time job
   b. Going to school regularly and studying hard
   c. Befriending teachers and joining "barkadas"
   d. Joining extracurricular activities in school

8. Which of the following arguments disproves the belief that "Additional number of children is not a problem."

   a. Having a large number of children, especially if the income is small, will mean insufficient food, clothing, space, and other needs.
   b. Children help their parents at home and on the farm.
   c. Relatives help take care of one's children.
   d. Elder children take care of the younger ones.

9. Which among these practices tends to encourage large family size?

   a. Wanting to have a son if the children are all girls; and wanting to have a daughter if the children are all boys
   b. Having a medical check-up at least once a year
   c. Eating nutritious food
   d. Saying novenas to saints

10. Which activity is not in consonance with our population policy?

   a. Encouraging couples to go to the family-planning clinic
   b. Providing family-planning services in the rural areas
   c. Making available all methods of contraception, including abortion, to those who want them
   d. Making and publishing studies and investigations on Philippine population

Key to Correction

1. - c or b. If some students selected a or d, then this might be a revelation of their values or things that they consider most important. Perhaps a further discussion with them of the advantages and disadvantages of a and d, considering their present position, might change their values or attitudes.

2. - a

3. - c

4. - There is no right or wrong answer. The most altruistic basis that shows the most concern for others is d.

5. - There is no right or wrong answer. A student's selected answer will show the attitudes that he still has regarding planning.

6. - d

7. - b

8. - a

9. - a

10. - c

APPENDIX A

Are You Ready for Marriage?

(These points are intended to bring out issues which will help a couple contemplating early marriage. Presumably, the answer "Yes" to all the questions indicates marriage readiness.)

1. Have either of you or both had success in holding a responsible job?

   Yes No

2. Can you talk freely on such matters as money, religion, sex, relationships with your families, and expectations in marriage?

   Yes No

3. Have either of you or both had any experience in caring for children?

   Yes No

4. Have you talked over all the reasons for wanting to marry now?

   Yes No

5. Have either of you or both had the responsibility of managing a household?

   Yes No

6. Have you weighed advantages and disadvantages of marrying now?

   Yes No

7. Are you fully ready for the sexual family-planning side of marriage?

   Yes No

Reference: Landis, Paul H., Making the Most of Marriage.
New York: Appletown-Century Craits, 1965.